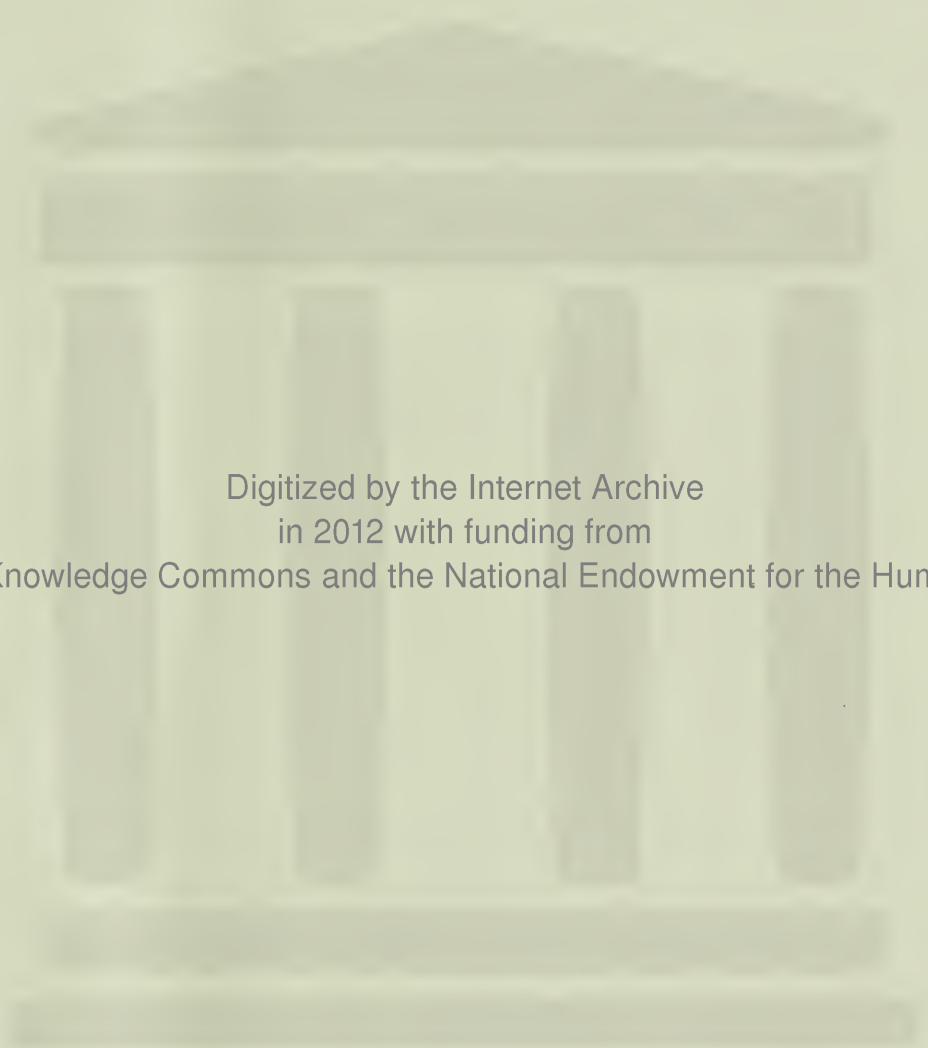


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THE AMERICAN MEDICAL MONTHLY.

JANUARY, 1862.

ESSAYS, MONOGRAPHS, AND CASES.

On the Animal Substances employed as Medicines by the Ancients. By
G. J. FISHER, A.M., M.D., of Sing Sing, N. Y. (Read before
the Westchester County Medical Society, June 11th, 1861.)

“Declare the past and present state of things.”—DRYDEN.

Having on a number of occasions observed that various animal substances or products are, in this enlightened day, employed as popular and domestic remedies in the treatment of certain diseases and injuries, I have been led to investigate the history of their origin and use. An attempt has been made to ascertain how far their employment has resulted from accident or superstition, and to determine whether their continuance in use depended upon their possessing any of the medicinal properties which have been ascribed to them, or is in consequence of a blind devotion to authority, which has resulted in an established routine. Also, to determine, as far as my leisure and available means of research would afford, whether the profession or laity were most responsible for having introduced into the *Materia Medica* a list of animal products so disgusting, that their narration would produce a nausea in the least fastidious.

After a careful perusal of the works of Hippocrates, Celsus, Paulus Ægineta, MM. Pomet, Lemery, and Tournefort's *History of Drugs*, James' *Medicinal Dictionary*, (3 vols., folio, London, 1743,) the Dis-

pensatories of Quincy, and other authors of over a century past, I was not a little surprised to find that most of the absurd animal remedies now in popular use can be traced to a remote antiquity; indeed, that the few which are still occasionally employed by the non-professional are the merest moiety of the formidable and sickening catalogue which swelled the list of simples of the ancient *Materia Medica*, large numbers of which were continued in the Dispensatories until within about a century of the present time.

The substances under consideration were doubtless first used in the treatment of disease by physicians. Their introduction into the *Materia Medica* was in consequence of preconceived hypotheses and false analogies, resulting from a want of knowledge of general and organic chemistry, and of the physiology of digestion and nutrition. These false theories led them to *expect* certain results, which a blind devotion to their favorite views rendered them unable to discover were either useless or positively injurious. The supposed virtues of the article having been declared by one high in authority, it continued in use in obedience to this declaration, and hence by an established custom.

It was a favorite idea of the ancient physicians, that the use of the healthy parts or organs of animals, as food or medicine, would restore to health similar enfeebled or diseased tissues or organs in the human body.

Thus it was in the ancient and early history of medicine, and to no little extent is it now true, that the mass of medical men depend on the observations, experience, and opinions of a few leading spirits, who are supposed to possess superior advantages or talent.

In Pomet's "*Complete History of Drugs*," dedicated, by permission, to Sir Hans Sloane, and published only a little more than a century ago, nearly one hundred quarto pages are devoted to an account of animal medicines. The following is a specimen of his therapeutical logic, to be found in the preface of the work:

"The different degrees of volatility that are in animal substances give them different virtues one from the other: so those which have so very volatile salts are usually reckoned cephalick and diaphoretick; as the *Viper*, *Human Skull*, *Hart's-horn*, *Goat's blood*, *Elk's-claw*; because the matter being heated in the *Viscera*, pushes forth their salts into the brain, and by the pores of the body. Those whose substance is less volatile have an aperitive virtue, such as is to be met withal in *Hog-lice* and *Craw-fish*; because the salts of these animals being heavier, are more inclinable to precipitate and open the urinary passages."

The *Materia Medica* was in harmony with the philosophy. As science advances, and the investigation of the properties and effects of medicinal agents is rigidly pursued, notwithstanding the continued discovery of new territory, and of new elements, both organic and inorganic, the tendency is to constantly diminish the number of substances worthy of a place in our *Pharmacopœias*.

The *Materia Medica* of Dioscorides contained an account of the history and virtues of nine hundred and fifty-eight simples; embracing ninety minerals, seven hundred plants, and one hundred and sixty-eight animal substances; which is nearly triple the number of officinal simples contained in any of the *Dispensatories* of the present day.

The last edition of the *United States Pharmacopœia* (1850) enumerates in the officinal list of the *Materia Medica* two hundred and forty-four articles, of which one hundred and ninety are vegetable, fifty-four mineral, and only sixteen animal substances. The secondary list, of the same edition, contains ninety-one articles, all of which are vegetable. The total number of articles in the officinal and secondary lists of the *National Pharmacopœia* is three hundred and thirty-five, of which two hundred and eighty are derived from the vegetable, fifty-four from the mineral, and sixteen only from the animal kingdom.

The animal products are as follows: Lard, suet, neat's-foot oil, cod-liver oil, spermaceti, isinglass, egg, castor, musk, Spanish-flies, potato-flies, cochineal, sponge, bone, animal charcoal, and oyster-shell. More than half of these are not supposed to possess any strictly medicinal properties, being used chiefly as pharmaceutical auxiliaries.

The following is a list of the animal substances which I find particularly mentioned in the works above referred to. A large proportion of them were employed as medicines previous to the time of Hippocrates, and continued in use until within a century of the present time.

It will be seen that every class of the animal kingdom contributed to the ancient *Materia Medica*. I have attempted to arrange them, from all the above-cited sources, under the following appropriate heads—mammals, birds, reptiles, fishes, crustaceans, insects, mollusks, and radiates.

1. MAMMALS.

Supplied the following Drugs: (?)

Man—Mummy, man's skull, moss of a dead man's skull, dead man's hand. Royal touch, hair, nails, fat, marrow, heart, blood, milk, semen, ear-wax, sweat, saliva, urine, stone in the bladder, menstrual

discharges, dung, secundines or after-birth, and the membrane found around the head of the fœtus.

Cow—The bile and dung.

Bull—The horn and blood.

Ox—Fat, bile, dung, ankle and thigh bones.

Goat—Fat, liver, bile, blood, urine, dung, horn, and balls of hair found in the stomach.

Bezoar—Stone in the stomach, (Bezoar stone.)

Sheep—Wool, skin, brain, bile, dung.

Camel—Brain, rennet, urine.

Stag—Flesh, blood, sweat, tears, fat, marrow, brain, lungs, heart, bone of the stag's heart, (*os de corde cervi*,) balls of hair found in the stomach, horn, hoof, tooth, tail, testicle, and penis.

Roebuck—Liver, bile, rennet, dung.

Hart—The horn.

Antelope—The rennet.

Chamois—Blood, fat, liver, bile, dung, and the stone found in the stomach.

Elk—Hoof.

Horse—Blood, rennet, dung.

Ass—Liver, dung.

Mule—Urine.

Elephant—Teeth, bones, hoofs.

Rhinoceros—Horn.

Hippopotamus—Testicle, fat, ashes. "A ring made of the pizzle, and worn, is said to cure the cramp."—POMET.

Hog—Fat, bile, dung, ankle-bone.

Hedgehog—Flesh, skin.

Lion—Fat.

Cat—Dung. Blood of black cat's tail, (modern.)

Hyæna—Bile.

Bear—Skin, fat, blood, liver, bile.

Wolf—Liver, dung.

Fox—Whole animal, fat, lungs.

Dog—Fat, liver, dung.

Weasel—Entire animal, brain, stomach.

Bat—Blood.

Mouse—Head, dung.

Musk-rat—Testicle.

Beaver—Castor.

Hare—Ashes, hair, head, brain, eye, lungs, heart, blood, coagulum, liver, bile, kidneys, uterus, testicle, astragalus, rennet, dung.

Seal—Rennet.

Sea-Cow—Bone or stone in the head.

Unicorn (?)—Horn.

Whale—Spermaceti, which, Pomet says, is the brain, and that “In the year 1688, there was one taken by a *Spanish* ship, that carried it to *St. Sebastian’s*, from the Head of which were taken twenty-four barrels of Brain, and from the Body ninety-six barrels of Fat. They ought to be undeceived who believe that *Sperma Ceti* is anything else but the Brain of the *Cachalot*; and I can affirm this with Certainty.”

2. BIRDS. (“*Medicinal Birds*.”)—POMET.

Domestic Fowl—Fat, blood, bile, dung. The *Cock*, his brain; and the *Hen*, her stomach.

Duck, *Tame Pigeon*, *Owl*—Blood.

Peacock, *Stork*, *Starling*—Dung.

Hawk, *Partridge*—Bile.

Goose—Blood, fat, dung.

Wild Pigeon—Blood, stomach, dung.

Ring-Dove—Blood, dung.

Swallow—Entire bird, blood, brain, dung.

Cormorant—Liver, stomach.

Lark, *Sparrow*—Entire bird.

Kite—Head.

Ostrich—Flesh, skin of the stomach, fat.

Eagle—Flesh, bile, brain, dung, testicles, and “a stone that is found at the entrance of the hole where the bird builds her nest.” (The eagle-stones were said to procure easy and safe labor, and to prevent miscarriage.)

Vulture—Flesh, fat, brain, gall, dung.

Frigate or Man-of-War Bird—“The oil or fat is a sovereign remedy for *sciatica* pains, and for all others proceeding from a cold cause.”

Birds’ Nests—Several kinds were in use, especially those of a species of swallow found in China. Pomet says, “The Chinese assign mighty virtues to this nest; as it nourishes extremely, being boiled in water with a fowl and ginger. They reckon it very good for curing pains at the stomach, and for restoring those that are in a languishing condition.”

3. REPTILES.

Crocodile—Blood, dung.

Lizard—Entire animal, head, liver, blood, dung.

Chalcidic Lizard—Entire animal.

Sea-Skink, (a kind of lizard)—Entire animal, kidneys, belly, or stomach.

Swift—Entire animal.

Salamander—Entire animal.

Chamelion—Blood.

Frog—Entire animal, blood.

Toad—Entire animal, blood, oil, volatile salt, and stone in the head.

Turtle, (*Land*)—Blood, oil.

Tortoise, (*Sea*)—Volatile salt, oil, bile, blood.

Serpent—Skin.

Viper—Trunk separated from the skin, intestines, &c., fat, skin, gall, heart, liver, volatile salt of the entire animal.

Pomet says, "You ought to be careful that every bundle or parcel of vipers, which is usually a dozen, have the hearts and livers along with them, these being the most noble parts of the animal. Vipers ought to be heavy, large, long, well dried, and the freshest killed that can be got," &c. He also adds, "Both for external and internal uses there is scarcely found a more universal medicine than the volatile salts of vipers." "All other preparations of vipers, as powders, fixed salts, tinctures, decoctions, broths, jellies, wines, essences, troches, elixirs, extracts, &c., compared with the volatile salt, are nothing, for in that is to be found the sum of all that is in the viper."

4. FISHES.

Narwal, (sea-unicorn,) horn, oil.

Shark, bone of the head, spawn, and fossil teeth, which were worn in strings about the neck of children to aid in cutting their teeth, &c.

Anchovy, head; the whole fish was applied to the feet in fevers.

Herring, head. *Shad*, entire. *Tunny* or *Spanish Mackerel*, volatile salt. *Torpedo*, live animal, oil. *Triglar* or *Mullet*, entire. *Pastinaca marina*, whole fish.

Calionimus, bile. *Hippocampus*, entire, ashes.

Sea-Scorpion, oil, bile. *Fish* of several species, isinglass. *Alcyonia* consisted of the bones of fishes vomited by the kingfisher.

5. CRUSTACEANS.

Crab, (sea,) entire, ashes, claws, eyes. (?)

Hermit Crab or *Soldier*, ashes, oil. *Squilla*, entire.

6. INSECTS AND WORMS.

Ants, volatile salt. *Grasshopper*. *Cicada* or *Harvest Fly*. *Can-*

tharides. *Cockroach*, entrails. *Meloe*. *Buprestis*. *Bees* or *Honey-Flies*, whole insect, honey, wax. *Dog-tick*. *Spider*, entire, web. *Caterpillar*. *Cochineal*. *Centipede*. *Scorpion*, ashes, oil. *Earth-Worms*, volatile salt.

Silk-worm, cocoon: the raw silk taken in powder, says Pomet, "makes the heart pleasant, the spirits brisk, and cleanses the blood."

Millepedes, (sow-bugs or hog-lice,) volatile salt, oil, and powder. The above-cited author says, "Of millepedes there are many preparations, but the best way of taking them is certainly swallowing them alive; and the next to that, their expression made with wine."

7. MOLLUSKS.

Harpa, *Nerita*, *Helix pomatia*, and other snails. *Solen*, *Oyster*, *Purpura*. *Buccium*, many species. *Limpet*, *Pearl-Shells*, several species. *Dentalium*, *Teredo*. *Strombus*, and other shells, furnished their opercula or lids. *Cuttle-fish*, entire, bone, ink-fluid. "The eggs or spawn of the cuttle-fish provoke urine and the terms."—POMET.

It is impossible to identify many of the shells which were used in ancient medicine. Shells generally were regarded as "good sweeteners of the blood; also good against a canine appetite, a flux of the belly, and a hæmorrhage."

8. RADIATES.

Echinus, (or sea-urchin, or sea-eggs,) *Coral*, *Sponge*. After such a list, who would not say—

"Throw physic to the dogs, I'll none of it?"—SHAK.

It is possible that by a more diligent and critical examination of ancient Pharmacopœias and Dispensatories, the list of animal drugs could have been further extended. However, I have presented, at the lowest computation, a catalogue of two hundred and eighty-five articles, of which, 38 mammals supplied one hundred and thirty-five drugs, 21 birds forty-seven, 13 reptiles thirty-four, 12 fishes twenty one, 3 crustaceans seven, 17 insects and worms twenty-three, 15 mollusks fifteen, 3 radiates three; total, 122 animals specified, furnished 285 simples of the materia medica employed by the ancients, most of which were continued in quite general use until within about a century of the present date!

To treat of the virtues which were attributed to these articles, and the countless preparations into which they entered, would require a large folio volume. The limit of the present essay will barely permit

me briefly to allude, by way of illustration, to some of the medicinal properties and uses of the several parts of the stag, and of the human body, as recorded in the old Dispensatories.

The above table or catalogue of animal medicines will not be found in any work; it is the result of considerable research, extended over many volumes.

It was at first contemplated to classify the animal products, and treat of their virtues and application under distinct heads; space would not permit. We find in the above list 23 varieties of blood, 15 of bile, 4 of urine, 7 of brain, 13 of liver, 26 of fæces, &c., &c.; almost *ad infinitum*, certainly *ad nauseam*.

The examples selected will serve to illustrate the great variety of products obtained from a single body, the false and superstitious notions which led to their employment, and the absurd ideas entertained in regard to the effects supposed to have been produced by them in the treatment of disease.

The Stag.—This was regarded as one of the most important “medicinal animals” of the ancients. The head and horns have been used as the coat of arms or symbol of Pharmacy from time immemorial, and are yet quite generally to be seen over the doors of the apothecaries in Belgium and other Continental countries.

Almost every portion of the stag was supposed to possess medical virtues, and was used as an antidote to poisons.

The *dried tears* of the stag, which are the sordes collected in the inner angle of the eye, resembling indurated ear-wax, in doses of three or four grains, were said to be good “against poisons, contagious diseases, difficult labors, and for expelling the dead fœtus. As an amulet, when tied to any part of the body, it was reputed to prove effectual against poisons.”

The *tooth*, and the *hoof* (if taken from one of the right feet) possessed the same virtue.

The *stag's skin* was used against strangulations of the womb.

“A belt made of the skin of a stag, killed while in the act of copulating with the female, is found from experience to be possessed of singular virtues. When applied to the loins, it is said infallibly to promote the expulsion of the fœtus. The shavings of the skin taken off with pumice-stone, and triturated with vinegar, are said to be proper for anointing an erysipelas. A man clothed in a stag's skin is proof against poison.”—*James' Med. Dic.*

The enmity between the stag and serpents was supposed to account for its anti-toxical properties.

The *brain* was used for pains in the hips and sides, and also for the cure of fractures; "but," says Dr. James, (vide *Med. Dic.*, 1743,) "as we have great plenty of such mollifying medicines, the brain of this animal is not at present kept in the shops."

The *rennet* of the calf of the red deer was used for "stopping immoderate discharges of the menses, and resolving coagulated milk; also for the cure of epilepsy."

The *heart*, and the *bone of the stag's heart*, (which was either from the valves or large vessels occasionally found ossified,) were used to antidote poisons; to procure longevity; as a specific against abortion; for the cure of pleurisy and diseases of the heart. The usual dose was ʒss. in powder. It was also used as an amulet in violent hæmorrhages, and as a defence against the bites of venomous animals.

"If the testicles or pudenda of any animal be anointed with the *stag's tail*, calcined and triturated with wine, it quickens the desire of venery in that animal, and it produces the same effects in men; it is said that by its acrimony it irritates the fibres, and produces that degree of rigidity requisite for a due erection." Dr. James says, "The tail of this animal is not, however, kept in the shops."

The *marrow* of the bones of the stag was used as an application to the neck and mouth of the womb, for inflammation, induration, or ulceration. It was also esteemed as an antidote to poisons, and "to adorn the skin."

The *fat* or suet of this animal, according to Dioscorides, was used to soften tumors, for ulcers, dysentery, &c. Hoffman directed it to be laid on linen cloth, melted by the fire, and applied to the gums, and says, "it surprisingly alleviates toothaches, and extracts the worms which create the pain."

The *ankle-bone* of the stag was accounted a remedy for colic, dysentery, and stone in the bladder.

The *horns* were the most celebrated in medicine; from these the spirit of hartshorn or aqua ammonia was first distilled; it had many virtues ascribed to it.

The *blood*, when dried, was used in clysters to cure ulcerations of the intestines and inveterate fluxes. It was drank in wine to antidote poisons, and to cure the gout and pleurisy. Dose from half a scruple to a drachm.

The *lungs* of the stag, when smoked and dried, were considered a valuable medicine for cough and consumption. Pliny highly recommended them, but Dr. James remarks, "We can assign no other rea-

son for this, than that stags, by their swiftness, demonstrate the goodness of their lungs."

The *claphopila*, or hairs collected in the stomach of the stag, goat, and some other animals, were used to restrain hæmorrhages, and as a cure for vertigo. These effects were supposed to be in consequence of the animals climbing very steep rocks without being giddy.

"The *penis* of the stag was said to be of singular use in medicine; but the stag must be killed in the time of coition, for by this means it is of the greatest efficacy in stimulating to venery, owing to the hot disposition of the animal. A drachm of it with a poached egg, and a small quantity of generous wine, proves a very powerful stimulus to venery; also as a powder rubbed on the testicles. If the stag is killed at any time except when in the act of copulation, its penis is an excellent remedy against dysentery and pleurisy; either in the form of a powder of ʒss. to ʒj., or shaven down. It is also used in decoction, and prepared in a jelly, for the cure of colic and hysteria. Dioscorides tells us, that those who are bitten by vipers receive relief by the penis of the stag, trituated and drank with wine.

Man.—"That experience which physicians in different ages have had of the good effects which the parts or excrements of a dead or living human body have had in the healing its like in many diseases, have engaged them often rather to have recourse to it than to what might be had of beasts, and to give the proper descriptions and preparations of the parts of the human body."—(POMET.)

The human *mummy*, especially the Egyptian, was formerly used in medicine. It was retained in the Edinburgh and Quincy's Dispensatories till within a century of the present time. Dr. James says, (1745,) "The true Egyptian mummies are very seldom found in the shops, but are what ought to be used in medicine. The next in goodness to these is what is called the Arabian mummy, which is a thick liquor, of a dark color and aromatic smell, flowing out of the bodies, embalmed with myrrh, aloes, &c."

A spurious article of mummy was often sold in the shops. Pomet relates in detail the "rogueries of the Jews," from an eye-witness, who, at Alexandria, was permitted to enter the house of a mummy manufacturer. "The Jew at last opened his magazine or storehouse, and showed him several bodies piled one upon another. Then, after a reflection of a quarter of an hour, he asked him what drugs he made use of, and what sort of bodies were fit for his service. The Jew answered him, that as to the dead, he took such bodies as he could get, whether they died of a common disease, or of some conta-

gion. And as to the drugs, that they were nothing but a heap of several old drugs mixed together, which he applied to the bodies; which, after he had dried in an oven, he sent into Europe, and that he was amazed to see the *Christians* were lovers of such filthiness."

"Mummy is reckoned a good resolvent of coagulated blood, after falls or blows, and a good antiseptic; acting not only by its bituminous and balsamic parts, but also by the volatile salts of the carcass from which it is made. By dissolving it in spirit of wine, we easily obtain a tincture which contains its balsamic qualities. It is given in epilepsies, vertigoes, and palsies; the dose is two drachms, in powder or bolus. It also stops mortifications, heals wounds, and is an ingredient in many compositions."

Human fat, sweat, and saliva are all retained in the Dispensatory of Quincy. Pomet says, "As everybody knows, in Paris, the public executioner sells it to those that want it, so the druggists and apothecaries sell very little." "Man's grease is emollient, discussive, anodyne, and anti-paralytic. It is good against gout, &c."

Human ear-wax, says Paulus Ægineta, "cures fissures of the skin about the roots of the nails." Pliny assures us that the wax of the ears cures bites inflicted by men; also the bites of serpents and scorpions, if applied immediately to the part affected. It had many other uses. Internally half a drachm of human ear-wax was used as a specific for colic. It was applied to weak eyes, to boils, wounds, inflammations, tumors of the joints, &c. Pauli says, "Though this unusual and nauseous medicine were of so much worth and excellence, that nothing could be objected against it, yet there are many remedies already approved, and more pleasant in themselves, by which the intentions with which this medicine is prescribed may be equally well answered; for who doubts the salutary effects produced by spermaceti in the colic? Or who doubts that the balsam of Peru or Copaiva are excellent vulneraries? Not to mention other things exhibited, with greater applause, by more cleanly and skillful physicians."

Human Urine.—Quincy remarks, "Some have got a notion of this being good for the scurvy, and drink their own water for that end. Some commend it, boiled to the consistence of honey, for rheumatic pains, rubbing it into the parts affected; in which case it may do good, because it cannot but be very penetrating."*

"*Human dung*," says Dr. James, (*Med. Dict.*), "applied fresh,

* Hartman says (*Opera. fol.*, p. 72,) he has often witnessed amongst the poor that difficult labor has been accelerated by a draught of the husband's urine!

preserves wounds from inflammation, and at the same time conglutinates them; dried and rubbed on the parts, it is reported to give relief under the quinsy."

"*The human secundines*, or after-birth," says the same author, "is reported to be of some use in medicine. Thus it is ordered to be applied warm, as it comes from the uterus, to the face, in order to remove freckles. A water is also distilled from it for destroying spots and blemishes on the face. When dried and reduced to a powder, it is used internally against epilepsies; for accelerating the delivery of the foetus, and allaying the pains of wounds. The dose of the powder is from ðss. to ðij. "

The human skull has been highly celebrated for the medicinal virtues it is said to exert in the cure of epilepsy, apoplexy, dysentery, fevers, and arthritic disorders. As an amulet, it was worn to cure consumption, hæmorrhage, and incontinence of urine. Pomet says, "Some virtues are attributed to the skulls taken from gibbets, but in all probability the heats and colds of the seasons have dissipated the greater part. The skulls of criminals newly hanged, stripped of the fleshy membrane, and the brains taken out, being well washed and dried, and separated with a saw from the lower part, are, or ought to be, what the druggists sell by the name of *Human Skull*." Reiger cautions the physician who prescribes this medicine uncalcined, "to take care that the skull which is used did not belong to a person who was infected with the pox, which frequently attacks this part." Juncker remarks, "When exhibited with other ingredients it is sometimes found of some efficacy in epilepsies, but very seldom when given alone." The principal shop composition in which a skull is an ingredient, says Dr. James, (*Med. Dict.*), is the *Pulvis ad Guttetam*.

Quincy very seriously remarks, (1749,) "Man's skull, it is to be feared, has obtained a place in medicine more from a whimsical philosophy than on any other account; and therefore we find it appropriated to distempers of the head chiefly."

"*The moss of a dead man's skull*," under the title of *Usnea Cranii Humani*, was formerly used in all diseases of the head. "The English druggists generally bring these heads from Ireland, where they frequently let the bodies of criminals hang on the gibbet till they fall to pieces. You may see in the druggists' shops of London some of these heads entirely covered with moss, and some that only have the moss growing on some parts; and we ought not to be surprised at the growth of this moss on the skulls of dead men unburied, since we daily see the hair of the head, beard, and some other parts of the human

body grow after death, as long as there is any moisture left to supply nourishment to the part; and that the same thing happens to the nails is evident; but whether it will hold as to the teeth, as some pretend, I dare not venture to affirm.”—(POMET.) Juncker, in his Therapeutic, affirms that *Usnea* renders the body so impenetrable, as not to be pierced with a musket-ball. Some writers declare that the moss gathered from the skulls of hanged persons is best; but Paracelsus asserts, that what is found on the skulls of persons broken on the wheel is no less valuable. It was thought that the vital and animal spirits of the deceased person are concentrated in this substance.

Manus Hominis Mortui.—The hand of a dead man was retained in the dispensatories as late as 1749. It was supposed to be of great efficacy in dispersing scrofulous tumors. The part was to be rubbed with the dead hand for some time; and report furnishes us with many instances of cures done hereby, “some of which,” says Quincy, “may not improbably be true, both as the imagination in the patient contributes much to such efficacies, and because the sensations which stroking in that manner gives is somewhat surprising, and occasions a shuddering chilliness upon the part touched, which may, in many cases, put the fibres in such contractions as to loosen, shake off, and dislodge the obstructed matter; in which consists the cure. But such practice,” he adds, “is too whimsical to be countenanced by any of worth in the profession of physic.”

I will omit the remainder of the human products, which were employed by our professional fathers in the treatment of disease, merely mentioning the *Manus Regalis*, or *Royal Touch*, which is included in the officinal list of Quincy’s Dispensatory, as a cure for scrofula. After expressing his opinion of its uselessness, he earnestly remarks: “However, perhaps the present Royal Family, whose merits have so justly placed them over us, will never condescend to make use of such a stratagem to awe their superstitious subjects, as may have been necessary to a weak or tyrannical governor.”

Here ends my account of the odious animal *materia medica*, so anciently, and yet so recently employed, in the treatment of human maladies. How striking the contrast of the present neat and pleasant establishment of the apothecary, containing the refined and elegant preparations of modern pharmacy, with the loathsome shops of former days, on whose shelves were piled the moss-covered, grinning skulls of executed felons; the grim and ghastly mummies of ancient Egypt; bundles of dried and contorted vipers, etc., etc.! It must

have been in a shop of this character that Romeo applied for a drachm of poison.

"I do remember an apothecary,—

* * * * *

"And in his needy shop a tortoise hung,
An alligator stuff'd, and other skins
Of ill-shaped fishes; and about his shelves
A beggarly account of empty boxes,
Green earthen pots, bladders and musty seeds,
Remnants of pack-thread, and old cakes of roses,
Were thinly scatter'd, to make up a show."

Strange as it may appear to any intelligent person, that such absurd and disgusting remedies should ever have been employed, even in the dark and ignorant periods of the world's history; yet how much more remarkable is the fact that, in this enlightened age, with all the facilities for a free and universal diffusion of general and scientific knowledge, credulity and traditional superstition still prevail to so humiliating a degree, that many equally vile and irrational means are employed by quacks, and as domestic remedies, at the present moment!

I have known a medical man, who passed in the community as a respectable practitioner, to prescribe a living hen to be split open and applied to the abdomen, for an inflammation of the bowels. On another occasion, I knew the same man to order a calf to be quickly killed, its liver taken out, and applied, while warm and reeking with blood, to the abdomen of a young girl, who was within a few hours of death from peritonitis! In both cases the doctor explained the *modus operandi* as follows: The hen (or liver) is applied to *draw out* the inflammation; if it succeeds, the flesh will become dark, and speedily emit a putrescent odor! I have frequently known the common people, and, indeed, some otherwise very sensible persons, to give their children large doses of human urine and molasses for croup. A man in Sing Sing, who possesses common sense on common subjects, gave his child, which was about one year old, a quantity of human fæces mixed with urine, as a remedy for spurious croup! I was then called, and found the unfortunate infant prostrated from excessive and persistent vomiting, occasioned by this vilest of vile doses, from the effects of which, and not from croup, the miserable babe died.

Only a few days since, a quack in Peekskill prescribed for a former patient of mine, who had cystic ovarian disease, a decoction or infu-

sion of honey-bees, as a diuretic, to remove the dropsy! I have several times found ladies who were suffering with inflammation or abscess of the breast, with huge poultices of fresh cow-dung, which had been applied to the gland, at the urgent solicitation of some *friend*. I have also seen the fæces of the common hen applied to felons. Sheep or goat's dung, given in infusion, is not an unpopular remedy at the present time for the cure of measles. I have known several persons who have taken this "nanny-berry tea."

A *doctor-woman* in Sing Sing is in the habit of curing the shingles by that time-honored remedy, the blood of a black cat's tail.

While suffering under an attack of tonsillitis, I have been entreated to apply to the throat a living frog, which it was said would hasten suppuration and the bursting of the abscess. The frog is said to die in a very short time after it is applied; and numerous "modern instances" were adduced in proof of the efficacy of this ranine treatment. I have known swallows' nests, boiled in milk, to be used as a poultice for quinsy in several instances.

The royal touch is not employed in this country, for the simple reason that we have no kings or queens; but, as a substitute, we have "the seventh son of a seventh son," who is generally believed to possess the supernatural power to disperse all scrofulous diseases. I have heard men and women, in whose veracity on all subjects but medicine I would have implicit confidence, declare that they had known and seen patients cured within a few weeks of obstinate and chronic scrofulous swellings and ulcers, by the laying on of hands of one of these miraculous individuals.

At the present time there is a stupendous quack in the City of New York, one whose fame is not unknown in other localities in this country, whose rooms are crowded by hundreds of patients, many, if not most, of whom are from among the opulent of that great metropolis. This founder of the Newtonian system of cure, who so rapidly accumulates silver and gold, and crutches and canes, from the *weak* and *lame* who seek his marvelous skill, removes their manifold ills in the twinkling of an eye, by the mere touch, and his sacrilegious invocations of Deity. Than this vile and impious wretch, the world has never produced a more successful charlatan.

He claimed to cure every ill that flesh is heir to—ovarian, uterine, and other tumors, &c., &c. I knew several intelligent persons who applied to him, who were assured that their tumors, &c., would speedily vanish.

From these and other facts which could be accumulated, it would

at first view appear that superstition and credulity are nearly as rife at the present as at any former period of time. It is not, however, so universal; it is perhaps restricted to a class, which I am sorry to say is yet very large, in whom the organ of marvelousness is hypertrophied—a condition which manifests itself in seeking Spiritualism, Clairvoyance, Astrology, Homœopathy, and the kindred delusions of the day. When will the principles of sound education and the element of good common sense so far prevail, that these ancient and modern absurdities will cease to delude so great a portion of the community?

On Pulsatilla. By JOHN C. PETERS, M.D.

(Continued from Vol. XVI., page 410.)

False Vertigo.—Lowenhardt has found it rapidly and certainly useful against this form of disease, which is said to have been first described by Marcus Herz; it is supposed to have its seat in the organs of sight, and is characterized by a feeling of tension in the lids, which commences in the external angle of one or both the eyes, and is attended with an appearance of glittering or glimmering, during which all objects whose rays strike the eye from that side seem to have a very quick, waving motion. Hufeland describes it as if one was looking through moving water, or through an atmosphere which is very much heated and quivering, and through which a number of bright-colored, circular or serpentine objects are in violent motion.

It is a marked peculiarity of this disorder, that there is no accompanying dizziness, no confusion of the mind, no obstruction of thought, no turning around of objects, or fear of falling; all of which serve to distinguish it from vertiginous attacks arising from derangement of the stomach, or of the brain. As a general rule, only one eye is affected at a time. Herz attributes the paroxysms to suppression of the functions of the skin. It yields to a few grains of extract of pulsatilla, although belladonna, digitalis, opium, and common anti-bilious and anti-gastric treatment are of no avail. Lowenhardt gave one-grain doses of the extract every night and morning.

Among the Germans, pulsatilla is used almost exclusively in diseases of the eyes, especially those of a rheumatic or arthritic nature, or arising from the sudden suppression of some accustomed perspiration or eruption. Sobernheim says it is more useful in *Amaurosis paralytica rheumatica* than in any other affection of the eye, and that its

well-deserved great reputation is based upon its usefulness in this disease. Graefe gave one-grain doses of the herb, mixed with a sufficient quantity of the extract, to be conveniently made into pills, from one to seven times per day. He usually gave a course of at least sixty pills, but sometimes preferred table-spoonful doses of an infusion of from one to three drachms of the herb in eight ounces of water. Rust relied upon twenty to sixty drop doses, three times a day, of a solution of one-half drachm of extract of pulsatilla in one-half oz. of wine of antimony. In opacities of the cornea, and also in commencing cataract, Graefe used an infusion of three drachms of the herb in six ounces of water, to which one grain of hydrarg. muriat. corrosiv. was added.

It is well known the celebrated Baron Störck first introduced pulsatilla fully into the regular practice of medicine, more especially in diseases of the eye.

Störck used either seven or fourteen grains of the extract of pulsatilla, rubbed up into a very fine powder in a marble mortar, with one drachm of sugar of milk; of these preparations, he gave from twenty to thirty grains, three times a day.

CASE 1.—A man, aged twenty-one, after having had venereal ulcers of the throat, was attacked with syphilitic ophthalmia of both eyes. He could see a little, indistinctly, with the right eye, but the left was entirely blinded by an albugo; the right parotid gland was also enlarged and hard. Mercurials and antimonials were given, without benefit. The weaker powder of pulsatilla was given by Störck, in scruple doses, every night and morning. The remedy caused increased pain in the eyes and lachrymation, followed by salivation and improvement of sight; when the salivation ceased, an offensive diarrhœa occurred. After this treatment had been followed up for five weeks the patient could see quite well with the right eye, and better with the left, as the albugo had commenced to disappear. Then the same doses were given three times a day, followed by a renewal of the pains in the eyes, increased lachrymation, and more profuse and frequent discharges of urine; but, in a few days, the pains in the eyes lessened, and the parotid began to soften, and, at the end of two months, there was a still greater improvement of the sight. The stronger powder was now given, in thirty-grain doses, three times a day, and in four months the patient was quite cured, both of his eye and parotid affection.

CASE 2.—A woman, aged twenty-eight, had been blind for several years, with a thick *pannus* over both, but more particularly over the

whole left cornea. The weaker powder was given, in twenty-grain doses, three times a day, and, in fourteen days, the opacity began to grow thinner, and the patient could easily distinguish light from darkness. The stronger powder was now given, in fifteen-grain doses, three times a day, and in six weeks more the right eye was quite restored, and there was every prospect that the left would be so also. The remedy caused violent pains about the eyes, and slight diarrhœa.

CASE 3.—Scar and opacity of the whole left cornea, remaining after the bursting of an abscess, in a girl aged twenty. Many remedies had been used, without benefit, when the weaker powder was given as above; she was cured in two months. Soon after the commencement of the treatment, her *menses, which had been suppressed for a year, returned*, and continued to do so regularly.

CASE 4.—Complete amaurosis of the right eye for twelve years, and of the left eye for a year and a half, in a woman aged thirty-nine; many remedies had, of course, been used in vain. The weaker powder was given as above, followed by the occurrence of very violent, rending, lacerating, boring, and lancinating pains in the eyes, and profuse lachrymation. In the course of three weeks, *her menses, which had been suppressed for several years, returned again freely*; at the end of six weeks she could plainly distinguish light, and her pupils had become movable; at the end of five months, she could see objects with her left eye, could distinguish colors, and was able to walk alone; she also began to see a little with her right eye. Her menses continued to return every three weeks.

CASE 5.—Cataract for seven years, in the left eye of a man, aged sixty-two; his right eye was also very weak, and had gradually become so dim, that he not only could not attend to his work, but could not walk alone in the street. The stronger powder was given, in thirty-grain doses, three times a day, and, in twelve days, he could work a little with the right eye, and also distinguish candlelight with the left.

The equally celebrated Kopp cured a case of erethismus oculorum, or morbid sensibility of the retina, with ten-drop doses of the strong tincture, three times a day; no aggravation or other unpleasant effects were noticed. Also severe pains in the eye, in another case, with the same doses. This experience would encourage us to use the remedy in some severe eye affections, and it is a question whether smaller doses would effect equally good cures.

It will be noticed that Störck frequently alludes to aggravations, supposed to have been caused by pulsatilla, when used against some forms of disease of the eye; this was a favorite notion with this dis-

tinguished physician, and he frequently refers to them while treating of other remedies: thus, in speaking of aconite, he says it is apt to cause pains in the bones and joints, which disappear after a more or less profuse perspiration sets in, accompanied by a somewhat copious flow of dark urine. It is probable that Hahnemann adopted many of Störck's views, especially those about aggravations, and the preparation of remedies by trituration with sugar of milk.

Pulsatilla is supposed to act upon many of the *mucous* membranes like senega, tolu, iodide of potassium, cubeb, and other remedies. According to Stillé, Wendt, Chelius, V. Ammon, and other German writers, attribute to senega an influence over scrofulous inflammations of the conjunctiva and cornea, including those which involve a rheumatic or gouty element. Hartshorne and Chapman, of Philadelphia, regarded senega as one of the most active, certain, and valuable of emmenagogues. It is saying but little when we assume that pulsatilla is far more efficient in both these respects.

In addition, pulsatilla is supposed to exert a specific action upon the mucous membranes of the ear, stomach, and bowels, bladder, urethra, and vagina.

Cases of recovery from disease of the ear like the following are not uncommon. A lad, aged 16, from injury of the ear and taking cold, was attacked eighteen months ago with pain, soreness, and bleeding from the right ear, followed by discharge in a few days; the pain was so severe that he slept but little at night for a month or two; the paroxysms of pain lasted for an hour or more, followed by an intermission of fifteen or twenty minutes; the ear discharged profusely of blood and matter for two or three days, about every two weeks, followed by a scanty discharge for some time, succeeded by soreness, redness and tenderness over the mastoid process. He gradually lost his hearing in the right ear, and three months subsequently in the left ear, although the latter never discharged. Both ears had been syringed carefully and repeatedly by his former physician, and blisters, which he roughly computed at about 150 in number, had been applied behind both ears, without improvement. When he came under my care, five and finally ten drop doses of tincture of pulsatilla were given twice a day, and a solution of one drachm of tinct. pulsatilla in seven drachms of glycerine was freely dropped into both ears, night and morning. Improvement commenced quickly, and in three months there was an entire restoration of hearing in both ears, and all tendency to paroxysms of pain and discharge had ceased.

The recovery remained permanent eight months afterwards, at last report.

As regards its action upon the bronchial mucous membrane, J. de Ramm has found it more useful in whooping-cough than belladonna or opium; and Lobenstein Lobel claims to have had the same experience, although he gave it in combination with valerian and fennel. De Ramm used it simply in doses of $\frac{1}{4}$ or $\frac{1}{2}$ grain of the extract, 3 or 4 times a day, for small children, and from $\frac{1}{2}$ to 1 grain for those about 5 years of age; to older patients he gave $1\frac{1}{2}$ or 2 grain doses. It has repeatedly happened to me to remove tedious, loose coughs, with much rattling of mucus, but comparatively little expectoration with this remedy; I have generally used from 1 to 2 drachms of the tincture in a tumbler of water, given in 1 or 2 table-spoonful doses. If, in addition, there is suppression of the menses from taking cold, both affections will often pass away under the use of pulsatilla. Even when there is a tendency to chills, fever, and perspiration, pulsatilla will often avail, although small doses of aconite, in alternation or combination with it, sometimes prove more efficacious.

Full doses of pulsatilla or dulcamara, with or without the aid of aconite, will often relieve severe catarrhal affections of the eyes, nose, and throat, such as severe attacks of influenza, &c.

Epithelial Gastric Catarrh is often associated with biliousness, and generally mistaken for it; it is characterized by a thick whitish or yellowish coat upon the tongue, an incapacity of the stomach to digest its contents, and an irritability of the viscus, which tends to reject by vomiting these undigested substances. At the same time, although the bile may be secreted in its usual quantity only, it is often forced up into the stomach by the effort of retching, and much of it is thrown out with the rejected food and mucus, or else passing downward, and little or none of it being absorbed by the intestinal mucous membrane, it is excreted in the shape of more or less copious bilious stools, intermingled with large quantities of mucus. According to Chambers, the frequency with which bile is vomited, the common occurrence of large quantities of bile in the diarrhœa of gastric catarrh, have acquired for the disorder the popular name of "bilious attack." It is caused, possibly, by an extension of the catarrhal state from the gastric mucous membrane to that of the duodenum, and perhaps even to that of the gall-ducts themselves. It has been conjectured that there is an increased secretion of mucus from the surface of the gall-ducts, which, mixed with the bile, makes the latter somewhat unsuitable for reabsorption, which is further impeded by an excessive secretion of mucus

along the whole length of the small bowels. In addition to other remedies, pulsatilla, dulcamara, and the muriate of ammonia will be found exceedingly useful remedies.

Pulsatilla is consequently a main remedy in *chronic catarrh* or *mucous flux of the stomach*. According to Chambers, the symptoms of this disorder seem closely proportioned to the quantity of mucus secreted, and consequently to the extent of membrane involved; where these are slight, the difficulties of digestion often escape the notice of both patient and physician; there may only seem to be a state scarcely distinguishable from general atony and anæmia, viz., a certain want of appetite and deficiency of nutrition, or an incapacity of benefiting by the food taken. But in those cases in which the whole or greater part of the stomach is thickly coated with tenacious mucus, sufficient to interfere with the action of the gastric juice upon the food, then symptoms of a well-marked character manifest themselves: there is a sensation of uneasiness, and sometimes of pain in the epigastrium, coming on mostly at times when the stomach is empty; there may be a craving for food, but no sooner is any taken than it excites a feeling of weight and distention; in other cases, there is a sense of emptiness and sinking in the stomach, which leads the patient to take food, although there may not only be no appetite, but an absolute disgust for all of it. At times, quantities of glairy mucus alone are vomited up; at others, the food, enveloped in mucus, is not interpenetrated by the gastric juice, but takes on acetous fermentation, attended with acid eructations, heartburn, and a painful accumulation of flatus in the stomach, so that the distress resulting is of a spasmodic or distensive character, apparently relieved only by eructations or other discharges of wind. In cases of long duration, there is a dull leucophlegmatic aspect, and a feeling of weakness, with coldness of the extremities, and a small, feeble pulse. The patient is desponding, easily depressed; not absolutely melancholic, but easily disposed to dwell upon the gloomy side of things. It is in this class of cases that *cubebs*, aided or not by bismuth and prepared chalk, is so useful; but pulsatilla and benzoate of ammonia will cure many cases without their aid, especially if the doses are given when the stomach is empty of food.

Pulsatilla is also useful in some eruptions produced by the use of improper food, and is not a useless remedy to prevent attacks of gout, arising from the same cause. It has a continental reputation in some chronic skin diseases, in some rheumatic and arthritic affections, and even in syphilitic bone-pains. It will often render the excessive and routine use of colchicum unnecessary, and when combined with, or given in alternation with it, will render smaller doses more efficacious.

Effect of Chlorine and its Combinations on the Tissues. By Prof. BRYK, of Krakau. (Translated and condensed by C. A. HARTMANN, M.D., Cleveland, Ohio.)

1. *Character of the Crust Formed.*—The parts cauterized with chlorine or any of its combinations appear, at first, of a wax like consistence, but grow hard and decay under the influence of the atmosphere. The several layers of the crust formed by the tissues destroyed are easily separated. Fatty metamorphosis and mummification take place; the blood of the implicated vessels coagulates. The changes produced in morbid growths have been well described by Lambl, (*Virchow's Archiv.*, Bd. 8;) all of them undergo more or less fatty degeneration.

The crust diminishes in size from its borders towards the centre, and gradually changes into a brittle mass, scaling off superficially, while the deeper layers melt under the influence of the pus surrounding them.

Mummification and fatty metamorphosis, although apparently different, agree in the destruction of the elementary cells of the implicated tissues. The predominance of the one or the other depends on the intensity of the cauterization and the value of the caustic.

The color of the scabs depends upon the agent employed: it is white from chloride of zinc and corrosive sublimate; yellowish-white from chloride of platinum or lead; brown from the chlorides of antimony and bromine; yellow, changing to violet, from chloride of gold.

Chlorine and its combinations with alkalis produce a very soft, nearly diffuent crust; the metallic chlorides one of solid consistence.

The thickness of the crust is not less variable according to the combination producing it, the quantity and more or less concentrated state of the same, the duration of the application and the cauterized tissue. Generally, thin scabs follow the application of chlorine and the chlorinated alkalis; sublimate and chloride of platinum form the thickest crusts, from half an inch to an inch thick after application of half a drachm for six or eight hours. One drachm of chloride of zinc requires from 24 to 48 hours for the same effect; a repeated application of it does not result in destruction of the tissues beyond a certain depth. Chloride of antimony is equal to it. One drachm of chloride of iron, applied for twenty four hours, gives a crust four or five lines in thickness; chloride of bromine, under the same conditions, one from one-fourth to half an inch in depth; chloride of gold, one of hardly two lines. Chloride of lead may remain in contact with the

tissues for several days, without giving rise to more than very superficial incrustation. In a less concentrated state, or in smaller doses, or mixed with some absorbent powder, all these agents have a less marked effect.

A thick epidermis retards the influence of the caustic; a large amount of adipose tissue prevents the same to a considerable extent. The more tissues beneath the point of application, the more superficial the destruction. Morbid growths are comparatively easily incrustated, if not penetrated by too numerous blood-vessels.

The histological alterations already referred to also differ somewhat under different caustics. Chlorine and the alkaline chlorides promote principally the fatty degeneration; in morbid growths this is especially manifest in the cellular elements of pus, which becomes inspissated and interspersed with fatty coagulations. As far as the intensity of the fatty metamorphosis is concerned, the epithelium and certain groups of areolar tissue are affected to an equal degree with pus; the muscles are changed most intensely by chloride of potassium, less so by the chlorides of soda or calcium, or by fluid chlorine. But the last-named penetrates into the tissues to a depth of about three lines, while the chlorides of ammonium and sodium only go to a depth of one or two lines. Very weak solutions of the metallic chlorides have a similar effect as the alkaline compounds; but applied in substance, or in concentrated solution, the same agents induce more or less intense mummification. The most powerful in this regard is corrosive sublimate; next, chloride of platinum; both allowing fatty degeneration only in the deepest layers of the crust. Under the effect of chlorinated antimony or zinc, the two forms of destruction are about equal in extent. The brown-red crust produced by the chloride of iron is mummified in its upper layers, fatty degenerated below; the latter to the greatest extent. The brownish-violet crust following the application of chloride of gold shows only very superficial mummification, while its greater part is fatty. Chloride of bromine causes a dirty-brown, wax-like crust, interspersed with the whitish or gray color of its main parts; the walls of the implicated blood-vessels are readily softened and ruptured, causing exhausting hæmorrhages. When chloride of lead has been employed, hardly any mummification can be demonstrated; no coagulation takes place, and the walls of the blood-vessels suffer no injury.

From these effects, the chlorides named can be arranged in two classes: first, the metallic chlorides, having a prominently mummifying effect; secondly, those inducing more particularly fatty metamor-

phosis, to wit: chlorine, the alkaline chlorides, and weak solutions of the metallic compounds. According to the intensity of the effect, their order would be: corrosive sublimate and chloride of platinum; next, the chlorides of zinc, antimony, and iron; then those of bromine and gold; lead forming the connecting link with the remaining caustics.

2. *Anatomical Changes in the Surrounding Tissues.*—Considerable increase of cellular nuclei in the areolar tissue and capillaries is often evident in six or eight, always in twenty-four hours. About the fourth or fifth day ensues a copious serous exudation from the newly-formed vessels of the granulating layer, washing off the nuclei in the form of pus mixed with fat-globules. By this time, the crust coming off, leaves a sore covered by granulations, which consist of newly-formed vessels and cells. The larger portion of the deeper new cells makes up the defect in areolar tissue. With the decrease of the serous transudation, the most superficial layer of the granulating surface, with some of the degenerated masses, dries into a compact, yellow crust, under which the cells change into epithelium and epidermis. The obstruction of the blood-vessels by coagulation, and the collateral hyperæmia consequent upon the application of the more powerful caustics, are certainly not without modifying influence on this process. The œdema is proportional to the intensity of the surrounding inflammation, the secretion of pus to the permeability of the vessels, and the quantity of the serous transudation.

The firm adhesion of the crust to the subjacent tissues acts as a mechanical influence. The occlusion of the wound and the direct compression prevent any exuberant development of the cellular elements, and favor the production of solid areolar tissue in the lower part of the granulating layer.

Cauterization is always followed by coldness and pain in its neighborhood, least so when the alkaline chlorides are employed. These are also not very apt to produce general functional disturbances. The urine, usually increased in quantity, shows albumen in proportion to the duration of the cauterizing influence; frequently traces of the substance employed, always a diminished amount of urea, chlorides and phosphates, usually also of uric acid, but larger quantities of the urinary pigments. All these symptoms continue as long as the caustic operates, and disappear in a few days after its removal. The metals are thrown out by the kidneys in the form of albuminates, or, perhaps, occasionally as stearates. There is evidently an intense catarrhal inflammation of the kidneys, caused by the elimination of the caustic. Too

frequent application of chlorinated metals may result in protracted and fatal albuminuria.

3. *Chemical Constituents of the Crust.*—A part of it is soluble in water, a part not. The former contains chloride of ammonium, albuminates of antimony and zinc, stearates of the oxides of antimony and zinc; the other free fatty acids, some metallic albuminates, a chlorinated proteineous substance, and some other metallic combination. The more soluble metallic albuminates and saponified metals are mostly resorbed and removed through the kidneys. This explains the mummifying process, but not the fatty degeneration, which seems to be due to the chemical influence of free chlorine. The soluble and chlorinated proteineous substances also owe their existence to the action of chlorine.

4. *Therapeutical Effects of the Caustic Chlorides.*—The escharotic action of particular value for the destruction of morbid growths depends in its success upon the location, extent and character of the morbid formation, as well as on individual conditions. The dose, combination, etc., are to be regulated by these indications.

As antiseptics, the chlorides have been employed a long time, especially against the different forms of gangrene. The chloride of calcium has been mostly used for that purpose. It is an ingredient of Morineau's antiseptic powder. But the metallic chlorides are the most powerful deodorizing agents. The chlorides of zinc, antimony, and mercury have been successfully applied to water-canker; the last-named also to atonic and gangrenous ulcers and hospital gangrene.

The hæmostatic property of the chlorides results from coagulation of the blood in the vessels reached, and formation of insoluble metallic albuminates and stearates; for this reason, that property is confined to the metallic chlorides. Many observers have confirmed the excellent hæmostatic effect of chlorinated iron. The chloride of zinc is a good application for the different forms of nævus angiectasia and fungus hæmatodes. It may be proper, in some cases, to combine these agents with mechanical hæmostatics. Generally, the hæmostatic effect of the metallic chlorides is modified by the size of the blood-vessels, the character of the caustic itself, the duration of its application, and the adhesion of the crust. Untimely removal of the latter is followed by obstinate hæmorrhage.

Of the greatest value is the destroying and colliquescent influence of the remedies referred to. The degeneration produced by them, in conjunction with the coagulated contents of the capillaries, limits exudation, as well as formation, of pus. Hence, the use of chloride of

soda in ophthalmic blennorrhœa; chlorate of potash in mercurial stomatitis; chloride of zinc in uterine and vaginal blennorrhœa; chlorine solution in variola, and chlorine inhalations in pulmonary catarrh. Hence also the cicatrizing power advantageously employed against slowly-healing fractures with external wounds and old atonic ulcers of the feet. An analogous influence is manifested on the induration and swelling of glandular organs, as well as on morbid formations: corrosive sublimate has been found to destroy pterygium and sarcoma of the gums; chloride of potassium has proved useful against canceroid tumor of the nose; chloride of gold, against induration of the tongue and scrofulous swelling of the sublingual glands.

5. *Disadvantageous Consequences.*—Corrosive sublimate applied to carcinomatous tumors is said to have repeatedly caused death in the midst of violent pains, vomiting and convulsions. Chloride of platinum appears to be scarcely less dangerous. Of the chloride of zinc, there is only one instance on record where its external application caused general indisposition. The other metallic, and all the alkaline chlorides, seem to be free from such effects, except the hyperæmia of the kidneys, already mentioned, and this should certainly not be overlooked.

Dangerous local hæmorrhage may happen from the rupture of larger vessels, in consequence of softening in their walls without coagulation of the contents. For this reason, the injections with chloride of iron, in solution, for aneurism, have been declared impracticable. On the other hand, too extensive obstruction of the blood-vessels around the cauterized parts is not less to be feared. Neighboring organs may be affected so as to cause death, even when the direct result of the cauterization appears satisfactory.

6. *Remarks on Combinations, etc.*—Notwithstanding its toxical influence, corrosive sublimate is of great value as a caustic, in the form of Plenk's solution, Von Graefe's corrosive ointment, etc. Combinations of it with other caustics are objectionable, although Justamond combined it with arsenic; Autenrieth with chloride of antimony and ointment of cantharides. The value of chloride of platinum cannot yet be determined. All the other metallic chlorides (except the almost powerless lead) may be combined with each other, according to their more or less intense effect. Some absorbent or gluing substance—powdered liquorice-root, plaster of Paris, asbestos, etc.—should always be added.

The selection of the caustic depends on the effect desired. Canquoin's combination of the chlorides of zinc and antimony forms a

good escharotic. Landolfi added the chlorides of bromine and gold, without good reason; his paste, however, can be used where a rapid destruction of several layers of tissue, or the suppression of putrid exhalations and mummification of necrotic tissue, is required. Chloride of iron might be substituted for that of gold. A combination of chloride of bromine with some other metallic chloride would answer the same purpose.—*Virchow's Archiv. fuer Pathologische Anatomie, etc.*

Transactions of the Medical Society of the County of Kings.

Vaccination. By A. N. BELL, M.D., Physician to Brooklyn City Hospital; Member of Kings County Medical Society, etc.

The resolution of the Society making it the duty of the Committee on Public Health to "*introduce the subject of Vaccination for discussion*" having devolved upon me, I propose, on behalf of the Committee, to present for the deliberation of the Society the following propositions:

1. *A résumé of the benefits of vaccination;*
2. *How the protective influence of vaccination may be impaired; and,*
3. *What measures are necessary to secure efficient vaccination.*

The facts which I present on these several propositions have been chiefly gleaned from periodical medical literature, and from the published papers produced by the indefatigable labors of the Epidemiological Society, and the General Board of Health, of London.

I. A RESUME OF THE BENEFITS OF VACCINATION.

From the year 1798 (the year when the immortal Jenner first announced to the world his great discovery) to the present time, facts have been constantly accumulating to the elucidation of the most universally accepted truth ever demonstrated by the science of medicine, namely, *that vaccination, when properly performed, is protection against small-pox.* The general assent of the medical profession to this truth appears to have been given very soon after its first promulgation. Dr. Copeland states that "the commencement of this century was remarkable for the progress of vaccination. In 1801 upward of six thousand persons had been vaccinated, and the greater part had been tested with small-pox. In 1800, 1801, and 1802, vaccination was introduced into France, Germany, Italy, Spain, and the East Indies. In 1802 Parliament voted Dr. Jenner a reward of

£10,000 for the discovery, and in 1807 the additional sum of £20,000. In 1808 vaccination was taken under the protection of the Government."—(*Dic. Med.*) During the period from 1799 to 1816, preservation from small-pox by vaccination was scarcely called in question. But succeeding this period, cases of small-pox subsequent to vaccination frequently occurred; until, finally, during the continuance of the great epidemics of small-pox which prevailed in Europe from 1819 to 1824, serious doubts began to be entertained whether vaccination had not lost its protective influence. In Marseilles alone, there were 30,000 cases of small-pox; and the number of vaccinated persons who wholly escaped was so small, that observers were obliged to conclude that the protection afforded by vaccination was, at most, only relative. The Jennerian Society accepted this conclusion; but soon after—small-pox continuing to prevail—relative immunity likewise became a question, and the subject was warmly discussed. Dr. Jenner admitted that a single vaccination did not always insure complete protection against small-pox, yet he claimed for it an immunity in most cases. By the opponents of vaccination this explanation was regarded as a mere apology for its failure, and numberless theoretical objections were propounded and urged with arguments of various force against its longer continuance.

It was said to be a *bestial humor*, implanted in the human race, that would inevitably produce new and dreadful diseases; *horns* would grow on the vaccinated, and a brutal fever would excite incongruous impressions on the human brain. Learned divines quoted Scripture, with dark insinuations against "contaminating the form of the Creator with the brute creation." And, as if to perpetuate the prejudices of the willfully blind, it is said that over the remains of Mr. John Birch, surgeon of the time to St. Thomas Hospital, may still be seen in one of the church-yards in Rood Lane, a monument erected by his sister, which commemorates that "*The Practice of Cow-poxing, which first became general in his day, undaunted by the overwhelming influence of power and prejudice, And the voice of nations, he uniformly and until death (1815) opposed.*"

At the time of Jenner's death, 1823, the feeling of doubt and skepticism regarding the benefit of his discovery was more prevalent in England than on the continent, yet he was not without honor even in his own country. The assent of the medical profession had been very generally obtained everywhere, and during the progress of the great epidemics of small-pox which continued to prevail for ten years longer, medical men satisfied themselves that the cause was to be

found rather in the neglect, than in the failure of vaccination. And from about the year 1835 to the present time, the testimony in favor of its prophylactic powers has been accepted as conclusive. Nevertheless, there always has been, and there probably always will be, a certain amount of opposition to this, as of other great truths, worked out by the science of medicine. Opposition to vaccination, according to Dr. John Simon—one of the most distinguished writers on the subject—may be divided into three sources:

“ 1. Hereditary opposition among the descendants of those whose fathers, friends, and teachers were contemporaries of Jenner, and among whom the old allegiance finds here and there a surviving follower of Birch, the surgeon of St. Thomas Hospital.

“ 2. The operation of personal eccentricities, against the common convictions of mankind. And

“ 3. Among persons who, for sinister purposes, are always ready to oppose any project, independent of its merits.”

But to these may be added a class of opposers, composed of men of limited observation, who are impressed with the sincere conviction that neither vaccination nor inoculation affords that security and protection from small-pox which is generally believed; a conviction impressed on their minds by a concurrence of what may be termed untoward instances within their own narrow sphere. And there is still another, and by no means inconsiderable, class—the votaries and dupes of impostors and superstition. “In the opinion of the ignorant multitude,” observes Lord Bacon, “witches and impostors have always held a competition with physicians.” Since the time of Lord Bacon the belief in witches has doubtless become much less general, but it may well be doubted whether the same can be said of impostors and their dupes, who are no less active in their competition or less powerful in their influence now, than were the witches and impostors in the days of Lord Bacon.

But it is to be presumed that no member of this Association belongs to either of the above-named classes of opposers to vaccination, or questions the truth of a doctrine now universally accepted. It is an article of our common faith, and we have so long exclusively practiced those incontestable arguments, which have been, in the words of Jenner, “engraved with the point of the lancet,” that we laugh at those foolish though potent agents in the community, which influence people to be criminally negligent of the greatest temporal benefit ever conferred on the human race.

The highest medical authorities to which we can refer recommend

“that *all* views and facts objected to vaccination be rigorously inquired into, and that there be published annually a true account of such inquiries, and an elucidation of whatever seems doubtful or contradictory.”*

“It is to be observed that the poisons producing all epidemic diseases are subject to variations; sometimes rapid, sometimes very gradual, both as to intensity and to several of the effects they produce; which makes it right to have the evidence of the efficacy of any such protecting power as cow-pox has always shown now for years, subjected to examination from time to time, with the view of ascertaining whether any such modification of its usual power has taken place.”†

Recent legislative action on the subject of vaccination, both in England and this country, has unfortunately been of but little, if any, more beneficial, than it was in England in 1808. The only benefit of the Vaccination Act, passed by the English Parliament in 1841, consisted in making it unlawful to continue the practice of inoculation; while, on the other hand, it served to array those who favored the practice of inoculation against both the law and the object of its enactment—namely, to promote vaccination. The object of the act of 1853 was to render vaccination *compulsory*. While this bill was under discussion, the “Small-pox and Vaccination Committee” of the Epidemiological Society made their famous Report to Parliament, on the prevalence and mortality of small-pox in different countries; and on the means taken to guard against its propagation, and to diminish its mortality through vaccination. The conclusions arrived at in the said Report are deduced from the largest and most accurate mass of statistical evidence ever brought to bear upon any question within the scope of medical science. Yet when that Report was made, notwithstanding the overwhelming evidence of its accuracy, there were men in the British Parliament, not unlike some of those to be found in our own legislative assemblies, so opposed to science, and so prejudiced against bills drawn up by medical men for the protection of public health, that the effectiveness of the measure was destroyed by its corruptions.

The Report of the Registrar-General for 1854 pointed out the imperfections of the act of the year before, and sought to have them

* Prof. Sigmund, of Vienna.

† Prof. Alison, of Edinburgh.

corrected. But the ill-directed influence of erroneous popular belief that "vaccination had introduced no end of diseases into the human body! and that the existence of cow-pox had been a curse to mankind," and similar misrepresentations, postponed all amendments. The act of 1853 continues, but it is an acknowledged failure. This state of things, however, has not discouraged the advocates of sanitary reform. On the contrary, it has stimulated effort, and thereby brought to bear upon the subject of vaccination an amount of statistical information no less convincing to the public than valuable to the medical profession. The nature and the extent of the evidence adduced by the labors of the Epidemiological Society and the General Board of Health of London preclude the necessity of making further researches in the same direction, and leaves to us the easy task of presenting the knowledge which those societies have brought to light.

Dr. John Simon, the physician to the General Board of Health, having been desired by the President of the Board "to lay before him such medical facts and considerations as may assist him (the President) in estimating the hygienic value of vaccination, and the strength of any objections which may have been alleged against its general adoption," propounded the following inquiries as leading topics for investigation:

"Tested by half a century's trial on millions of civilized Europe, what has vaccination achieved? Comparing the small-pox mortality of the last forty or fifty years with that of as many years in the last century, do we find a sensible difference? Has progress been made towards the final result which Jenner anticipated—the annihilation of the most dreadful scourge of the human race?"

In summing up his answer to these questions, Dr. Simon gives the following table, which contains two series of facts side by side; and shows, first, how many persons in each million of the population annually died of small-pox *before* the use of vaccination; and second, how many persons in each million of the population have annually died of small-pox *since* the use of vaccination:

MORTALITY STATISTICS OF SMALL-POX.

Terms of years respecting which particulars are given.	Territory.	Approximate Average Annual Death-Rate by Small-Pox per Million of living Population.	
		Before introduction of Vaccination.	After introduction of Vaccinat'n.
1777-1806 and 1807-1850...	Austria, Lower.....	2,484.....	340
1777-1806 and 1807-1850...	" Upper and Salzburg..	1,421.....	501
1777-1806 and 1807-1850...	Styria.....	1,052.....	446
1777-1806 and 1807-1850...	Illyria.....	518.....	244
1777-1806 and 1838-1850...	Trieste.....	14,046.....	182
1777-1803 and 1807-1850...	Tyrol and Voralberg.....	911.....	170
1777-1806 and 1807-1850...	Bohemia.....	2,174.....	215
1777-1806 and 1807-1850...	Moravia.....	5,402.....	255
1777-1806 and 1807-1850...	Silesia, (Austrian,).....	5,812.....	198
1777-1806 and 1807-1850...	Gallicia.....	1,194.....	676
1787-1806 and 1807-1850...	Bukswina.....	3,527.....	516
	1817-1850... Dalmatia.....	..	86
	1817-1850... Lombardy.....	..	87
	1817-1850... Venice.....	..	70
	1831-1850... Military Frontier.....	..	288
1776-1780 and 1810-1850...	Prussia, (Eastern Provinces,)..	3,321....	556
1780 and 1810-1850...	" (Western Provinces,)..	2,272.....	356
1780 and 1816-1850...	Posen.....	1,911.....	743
1776-1780 and 1810-1850...	Brandenburgh.....	2,181.....	181
1776-1780 and 1816-1850...	Westphalia.....	2,643.....	114
1776-1780 and 1816-1850...	Rhenish Provinces.....	908.....	90
1781-1805 and 1810-1850...	Berlin.....	3,422.....	876
1776-1780 and 1816-1850...	Saxony, (Prussia,).....	719..	170
1780 and 1810-1850...	Pomerania.....	1,774.....	130
	1810-1850... Silesia, (Prussia,).....	..	310
1774-1801 and 1810-1850...	Sweden.....	2,050.....	158
1751-1800 and 1801-1850...	Copenhagen.....	3,128.....	286

Dr. Simon adduces confirmatory evidence of the same purport from the records of Dr. Balfour relative to the army and navy. The combined weight of testimony from all sources shows *that, in the proportion as vaccination is general and efficient, so is the exclusion of small-pox from the community, and mortality greatly lessened.*

The Report of the Epidemiological Society demonstrates the same truth by extensive tabular statistics, agreeing with Dr. Simon's. The progress of vaccination in Great Britain and Germany is first compared as to its influence on mortality generally; and secondly, it is shown, by comparing the statistics of vaccination from various German States with the statistics from different districts in Great Britain and Ireland, that wherever vaccination is most perfectly carried out, small-pox is least mortal.

In England, out of every 1,000 deaths in the half-century from 1750 to 1800, (before vaccination,) there were of small-pox 96

Out of every 1,000 deaths in the half-century from 1800 to 1850, there were of small-pox 35

In various German States, in the last half-century before the practice of vaccination, out of every 1,000 deaths, there occurred from small-pox.....66.5

After vaccination there occurred from small-pox, out of every 1,000 deaths, only ... 7.26

In various countries and communities where vaccination is voluntary, and frequently neglected or carelessly performed, the deaths from all causes being 1,000, the deaths from small-pox range from 18 to 60. In the United States, there are no general statistics on this subject, of a reliable character. According to the mortality statistics of the United States Census for the year 1850, there were in that year 2,352 deaths from small-pox. "Yet," remarks the compiler of that report, "the returns of the Marshals have only to be examined with care, and deductions made from them, to satisfy the most careless observer that in the Union at large at least one-fourth of the whole number of deaths have not been reported at all." This would appear to be especially the case as regards small-pox. For in the City of New York alone, there has been an annual average of more than 400 deaths from small-pox for the last ten years. The proportion of deaths from small-pox for five years, from 1856 to 1860 inclusive, to the population in 1860, in our large cities, was as follows:

Providence,	one death in every 2,815 of the population.
Philadelphia,	" " 1,120 " "
Brooklyn,	" " 685 " "
Baltimore,	" " 522 " "
New York,	" " 478 " "
Boston,	" " 435 " "

Excepting Providence and Philadelphia, the same data give about 20 deaths from small-pox for every 1,000 deaths from all causes. During the current year, however, especially as regards Philadelphia, the ratio is considerably larger. And it is not a little remarkable that, according to our mortality statistics of small-pox, *more than half are of children under ten years of age*; plainly showing the criminal neglect of vaccination in early infancy. In communities where vaccination is more or less compulsory, and performed by competent persons, the deaths from all causes being 1,000, the deaths from small-pox range from *two to eight*. Upon the whole, it appears that the ratio of mortality from small-pox amongst vaccinated persons over all is $5\frac{1}{4}$ per cent.; but when vaccination is known to have been *well performed*, as shown by good cicatrices, the mortality is reduced to less than *one-half of one per cent.*

It thus appears that the existence of small-pox tends to promote an influence favorable to the development of other diseases—and especially so as regards scrofulous affections, including phthisis, and the worst form of fevers; and that whatever prevents the existence of small-pox, indirectly thwarts those conditions which are favorable to the rise and spread of other diseases.

Such are the protective powers, the benefits, of vaccination. The importance of a careful consideration of these conditions it is impossible to overestimate. A proper appreciation of them can lead to nothing less than their universal application in all civilized communities. But notwithstanding the signal benefits of vaccination, as now illustrated, my essay would be incomplete in this relation if I did not notice the opposing influences. Not many years ago, an artillery officer and distinguished mathematician of France, M. Hector Carnot, advanced the opinion that the mortality of small-pox, which had been removed by vaccination, had fallen upon other diseases, especially measles and scarlatina. This opinion, unfortunately, was espoused by Dr. Watt, a somewhat distinguished physician of Glasgow, who elaborated it into the "theory of displacement," which still has its votaries, though, as already shown, abundantly disproved by incontrovertible statistics. It is the well-known practice of quacks, however, to defame the science of medicine, by citing the errors of medical men, regardless of the correction made by others taught in the same careful school. Occasional misjudgments and erroneous conclusions of physicians are quoted, as if others were less competent to give an opinion on that account. There is, indeed, nothing perfect in the science of medicine, and its followers may often be ignorant; but the very progress which scientific medical men have made as a body, is a continued rebuke and correction of ignorance, whether it occur among themselves or among their traducers. Sir Humphrey Davy is said to have expressed the opinion that gas-lighting was impracticable on a large scale. Ever since the converse of this opinion has been realized, speculators have used Davy's mistake as a means of tempting moneyed men into companies, or into the adoption of mere fancies; as if an argument were derivable from that in favor of an object to be commended! The same is true in regard to the truths of medical science, and the displacement theory of Dr. Watt is a case in point. Yet quacks, and those who are influenced by them, use it for a double purpose—as authority for opposing vaccination, and as a basis for the absurd statement—in spite of statistics to the contrary

—that the viability of the human race has not increased under the auspices of medical science.

II. We now come to the second topic for investigation, namely: IN WHAT MANNER MAY THE PROTECTIVE INFLUENCE OF VACCINATION BE IMPAIRED?

The first question which arrests attention under this head is the popular belief "*that the protective power of vaccination becomes gradually weaker, and at length apparently dies out in the individual.*" Until about twenty years ago this was the common belief of physicians; but of late years susceptibility to small-pox, after vaccination, has received so many explanations, that it may be doubted whether the majority of medical men at the present time would endorse it. Certain it is, however, that *lapse of time* is a powerful, if not an exclusive, cause of recurring susceptibility to small-pox, subsequent to vaccination. At any rate, it may be safely stated that in proportion to the length of time that has elapsed since vaccination, is the individual susceptible to revaccination, and, *à fortiori*, to small-pox. "Generally, it may be stated," writes Dr. Simon, "that persons who had been vaccinated ten, fifteen, or twenty years, and who during the interval had perhaps repeatedly resisted small-pox, would, at length, in a certain proportion of their number, yield to the infection. This had most frequently happened during times when small-pox was severely epidemic among the unvaccinated; and the first notice of the fact meant that then, for the first time, *large masses of persons*, with vaccination of many years' standing, were exposed to the test of a strong epidemic influence, and that under this ordeal it became evident that for *some* vaccinated persons, the insusceptibility conferred by cow-pox was *not of life-long duration.*"

Dr. Marson, of the London Small-Pox Hospital, states that "But few patients under ten years of age have been received with small-pox after vaccination. After ten years the numbers begin to increase considerably, and the largest admitted are for the decennial period from the age of fifteen to twenty-five; and although progressively diminishing, they continued rather large up to thirty; and from thirty to thirty-five, they are nearly the same as from ten to fifteen; but as, in the unprotected at this period of life, the mortality is doubled: showing the cause to be, probably, as much, or more, dependent on age and its concomitants, than on other circumstances. In still further advanced life, the rate of mortality will be seen to increase also, as in the unprotected state; but, that this tendency may be in a considerable degree counteracted, there is but little doubt, by giving

more attention than has hitherto generally been given to the perfection of the process of vaccination ”

And again, in reference to *revaccination*, the same writer observes: “ Probably it does not afford the same amount of protection as the first vaccination, well performed, does. The great object to be aimed at is to vaccinate *well* in infancy; this should be looked upon as the sheet-anchor; and therefore a careless vaccination should be deprecated at all times, practiced under the belief that if it fails to take effect properly it will be of no consequence, as the operation can be repeated. By such proceeding, the vaccination often takes effect *badly*, and *will never afterwards take effect properly*; and yet the individual may take small-pox severely.”

The propriety of *revaccination* seems first to have become manifest during the progress of the great epidemic of small-pox in Marseilles, already referred to. It was then observed that small-pox occurred in about one-seventh of all those who had been before vaccinated; while it occurred in only one sixty-ninth of those who had before had small-pox. Upon this discovery, *revaccination* was extensively practiced, and chiefly instrumental in eradicating the epidemic. In the army of Wyrtemberg, Dr. Heim has collected the statistics of 40,000 cases of *revaccination*. Of this number, one-half reproduced perfect vaccine vesicles. The individuals in this category had been vaccinated twenty years and upward before. Lymph collected from these cases was of good quality, capable of transmitting immunity to other persons. 5,000 of the other cases had been vaccinated within a shorter period of time; in these the vaccine vesicles were partially reproduced, and they were regarded as having been partially susceptible to small-pox. The remaining 15,000 were of more recent vaccinations, and upon these *revaccination* had no effect; they were considered as being exempt from small-pox by the continued influence of a first vaccination.

The beneficial effect of *revaccinating* the army of Wyrtemberg was immediately apparent, in the diminution of small-pox. Subsequently, the Governments of Prussia, Bavaria, and the Duchess of Baden, ordered the *revaccination* of the masses, for the arrest of small-pox. The measure was effectual.

The most recent reliable statistics of *revaccination* are of the Prussian Army in 1860. “ During the year 1860, 69,096 soldiers were either vaccinated or *revaccinated*. Of this number, 57,325 exhibited cicatrices from former vaccinations, and 7,420 distinct cicatrices, while 4,151 showed no marks at all. The vaccination went through its regular course in 44,193 cases, was irregular in 8,256, and was with-

out result in 16,047. These last vaccinations, again, gave 5,577 examples of success, and 11,650 failures. During the year, there occurred among the above soldiers who were successfully vaccinated, and others who had been so in former years, six cases of chicken-pox, and one of varioloid, but no case of small-pox was met with. Thus, during the year 1860, out of 69,096 vaccinations, 49,777 proved successful—*i. e.*, 72 per cent. In the entire army there occurred 44 cases of pox during the year 1860, viz.: 17 chicken-pox, 23 varioloid, and 4 of small-pox. Of these, 3 of the cases of chicken-pox, 14 of varioloid, and 4 of small-pox, occurred in persons who had not been vaccinated; 8 of chicken-pox, 8 of varioloid, and 1 of small-pox, occurred in those who had been revaccinated without effect; and the remaining 7, as stated above, occurred in those who had been revaccinated with success.”*

In this country revaccination has received but little attention. Two occasions, however, of its practice on a comparatively large scale have come to my notice, and both of them are eminently illustrative of its utility. The first of the occasions to which I refer occurred some twenty-five years ago, on board a United States frigate, under the direction of the late Dr. Samuel Jackson, Surgeon of the U. S. Navy. Among a crew of about five hundred persons, there had been several cases of small-pox, placing the ship in quarantine at a foreign port. Good lymph being at hand, the whole ship's company were vaccinated, and the results carefully noted. One in six of the entire crew reproduced a more or less perfect vesicle; they had all been vaccinated before, and many of them within a short period. Those on whom no vaccine vesicle could be produced were found to be equally insusceptible to small-pox, which wholly ceased from the time the revaccinations took effect. The other instance to which I refer has occurred quite recently, and for its elucidation we are indebted to Dr. J. P. Loines, of the Eastern Dispensary of New York. Some weeks ago, Dr. Loines was called upon to furnish lymph to vaccinate about 7,000 volunteers, then encamped at Elmira. The officer in command of this division has since written to Dr. Loines that his lymph could not have been good, as only about one in four *took*. They had probably nearly all been vaccinated before. This experience of Dr. Loines, though not instituted for the purpose of putting a stop to an epidemic of small-pox, is nevertheless valuable in showing the liability of our soldiery to that dreadful disease, and amply sufficient to show the neces-

* *Med. Times and Gazette*, from *Preuss. Med. Zeitung*, 1861.

sity of revaccination for the armies of America. Indeed, the statistics establishing the benefits of revaccination everywhere that it has been tried, all go to show that it is only second in importance to a first vaccination.

In connection with the topic of revaccination, an important question suggests itself as to the *quality* of the lymph. Is the lymph resulting from revaccinations safe to use for the purposes of vaccinating or revaccinating others? "I have known," says one writer, in reply to a question propounded by the Board of Health, "matter taken from a revaccinated subject (having formerly had the regular cow-pock) cause an irregular and unpleasant, troublesome form of cutaneous eruption. Nor would I, under any circumstances, use such matter; as my experience tells me that (as a rule) a person, having once had regular cow-pock, is not susceptible of the genuine disease again. But, although you use good lymph, you get a spurious pustule, rising in three or four days, instead of eight or ten, putting on a different appearance, itching much, often causing inflammation of the absorbent glands and vessels, and much constitutional disturbance; in fact, acting as a morbid poison. Consequently, I object to revaccination." More than twenty years ago, the same objections were not only urged against the use of lymph from revaccinations, but against the use of lymph taken from adults under any circumstances, on account of the danger of transmitting other poisons. Syphilis, gonorrhœa, itch, and the like, attracted special attention, and became the subject of experimental investigation. Drs. Mead and Mosely, after much investigation, came to the conclusion that it was "more material into what kind of body the venom be infused, than out of whom it is taken." But, that nothing might be lacking in the extent of his researches, Dr. Simon widened the inquiry, and called for the opinion of the profession on the general question—"Have you any reason to believe or suspect (*a*) that lymph from a true Jennerian vesicle has ever been a vehicle of syphilitic, scrofulous, or other constitutional infection, to the vaccinated person; (*b*) or that unintentional inoculation with some other disease, instead of the proposed vaccination, has occurred in the hands of a duly-educated medical practitioner?" There were numerous replies to this question, but the opinions of Hebra were so logically and lucidly stated, that they were accepted as conclusive. "This widely-grasping question," writes Hebra, "requires several separate answers, because queries are made—

1. "*Whether the lymph of a vaccine vesicle may, besides its peculiar virus, contain another infectious principle—e. g., that of syphilis?*"

2. "*Whether constitutional non-infecting diseases, as, for instance, scrofula, may be transmitted by the inoculation of cow-pox matter?*"

3. "*Whether a vaccine vesicle possesses such characters that it may easily be distinguished from other similar vesicles, blebs, or pustules?*"

(I.) "The transmissible infectious principles which have hitherto been recognized, by means of inoculation, are, the syphilitic virus contained in the pus of chancre; and the virus contained in the cow-pox vesicle, and the small-pox pustule. The question, therefore, simply is, whether these morbid poisons have ever been mixed? Whether inoculations have ever taken place with such a mixture? And what results were obtained by such an operation? It is well known that compendious answers have for some time past been offered to these questions, chiefly the result of Sigmund's experiments. These answers agree in the following respects:

"Inoculation with secretions of this kind—viz., containing, as it were, several special poisons—either produced no effect at all, or only generated a chancre, by inoculating a mixture of pus from chancre and vaccine lymph; and only cow-pox, by inoculating a combination of vaccine lymph and blennorrhagic matter. Hence one morbid state only was produced—either cow-pox or syphilis; the latter circumstance being a proof that both poisons are not *simultaneously* transmissible. This opinion is supported by the experience of Heim, Ricord, Bousquet, Taupin, Landoury, Friedenger, and others.

(II.) "It is maintained in many quarters that the blood of persons suffering from secondary syphilis may serve as a vehicle to the infectious principle; but were even this theory found correct, it would have no prejudicial effect upon the practice of vaccination, because we know from experiments made for the purpose, (Heim,) and from accidental inoculation, that regardless of the quality of vaccine lymph, the latter may be inoculated from syphilitic upon sound individuals; and on the other hand, from sound subjects upon such as are under the influence of systematic syphilis, without propagating syphilis along with the cow-pox.

"What has here been proved of syphilis must, *à fortiori*, hold good as regards other constitutional morbid states, as direct inoculation with secretions peculiar to these diseases have always yielded a negative result.

"But although it is abundantly proved that scrofula-tubercular affections, rickets, cancer, and other blood diseases, cannot be transmitted by means of their own secretions or along with vaccine lymph, we should, nevertheless, if possible, avoid vaccinating diseased persons,

because experience has taught us, as regards adults and children, that the phenomena of vaccination may awake—i. e., render worse—dormant affections, and that, moreover, the cow-pox vesicle easily degenerates upon such individuals. These latter vesicles are, nevertheless, adapted to further propagation, even when they take an imperfect development; because a positive result, a regular development of the vesicle, and sufficient protection against small-pox, have been observed in cases where vaccine lymph has been transferred from weekly, scrofulous, and rickety subjects, upon perfectly sound individuals.

(III.) "Every morbid appearance on the cutaneous envelope has its own peculiar characters by which it may be distinguished from other similar phenomena; the vaccine vesicle presents, in like manner, sufficiently striking peculiarities as to form, size, number, locality, and particularly as regards its course, to enable the observer easily to establish a distinction between the same and other vesicular, bullar, or pustular eruptions."

Notwithstanding the clearness of the above conclusions by Hebra, Dr. A. Viennois, of Paris, has recently published a paper in the *Archives of Medicine* on the Transmission of Syphilis by Vaccination, illustrated by numerous cases of syphilis communicated simultaneously with vaccine lymph. The conditions of this transmissibility he believes to be the taking of blood with the lymph from a person affected with constitutional syphilis. And such matter, Viennois writes, will communicate *both* diseases; the vaccine vesicle appearing first. But after the usual period of incubation, the syphilitic tubercle also appears on the vaccinated part, and is soon after followed by secondary symptoms.

Another alleged cause of deterioration or irregular action of vaccine virus, is *its passage through numerous human bodies*; in other words, *vaccine lymph is weakened by the succession of subjects through whom it has been transmitted since its direct inoculation from the cow*. This has long been a question of serious consideration. Just previous to the Parliamentary Act of 1853, this question was taken up by the National Vaccine Establishment of England. And in the report of that institution for the year 1854, it is stated that "*Vaccine lymph does not lose any of its prophylactic power by continued transit through successive subjects.*" This statement was for a time accepted as final. But the subsequent researches of Simon have at least thrown much doubt upon this statement, if they have not, indeed, wholly controverted it. After quoting numerous investigators to the same purpose, Dr. Simon states, that "The lymph when taken from the cow seems

to show an amount of infective power which is not usual in lymph of long descent. The former *takes*, as the phrase is, in persons with whom the latter has failed; often, for instance, in revaccination. It excites local changes of an intenser kind, so active, indeed, as to render caution necessary in its use. The vesicle produced by it runs a full course, compared with which, the progress of common vaccine vesicles seems unduly rapid, and their termination premature. Also it renders more certain, and apparently more characteristic, that slight *febrile disturbance which is proper to the action of cow-pox on the human system*. These arguments of Dr Simon have not been as generally accepted by the medical profession as their weight would seem to warrant. Other causes of deterioration have been alleged and invented, as being amply sufficient for manifest enfeeblement. Carelessness in the operation, by the use of foul or blunt instruments, thus producing irritating wounds or otherwise modifying the specific influence, or the want of care in selecting and preserving the lymph, are by most persons deemed to be the only faults. While some there are who have taken just the opposite ground to Dr. Simon, and claim that vaccine matter undergoes progressive development to perfect potency by carefully selecting subjects for its transmission. Unquestionably the manner of performing the operation, bad selection and the use of matter not well preserved, are powerfully influencing causes, yet the weight of testimony—where all these influences have been met—appears to be *decidedly in favor of a more frequent resort to the cow*.

Dr. Marson, of the London Small-Pox Hospital, concludes that, among vaccinated persons infected with small-pox, the danger of the disease is determinable by the unskillfulness of the operator, or the imperfection of the vaccination as shown by the cicatrix. A good cicatrix he describes as “distinct, foveated, dotted or indented, in some instances radiated, and having a well-defined edge.”

The little pits, dots, or radiated lines, are the remains of the minute cells, which are necessary to a genuine vaccine vesicle; therefore, an indistinct, smooth cicatrix with an ill-defined edge, is imperfect and unreliable, no matter what kind of lymph may have been used in its production. There is, however, another kind of imperfection, sometimes followed by a good cicatrix, namely: an *absence of constitutional disturbance* during the course of the disease.

Specific febrile symptoms appear to be quite as necessary to effectual vaccination as a well-formed vesicle. The national statistics of revaccination in the armies of Russia and Prussia show that nearly one-third of all who are revaccinated “give again exactly such local phenom-

ena as arise in children when vaccinated for the first time; and it is also stated by Dr. Thiele, referring to the revaccination of Russian soldiers, that perfect vaccine vesicles would arise just as often on persons who once had small-pox, as on persons who had once been vaccinated." This evidence bears directly upon the necessity of specific fever, and plainly shows that there are two kinds of susceptibility, both as regards small-pox and vaccination: a local and a general susceptibility. Very few persons, indeed, if any, are insusceptible to these diseases; and persons who have been once the subject of one of them, rarely again suffer from the early recurrence of the same or the other, constitutionally, although the local vesicles may be again reproduced.

The influence of idiosyncrasy and hereditary predisposition are, it has been stated, sometimes adverse to the susceptibility to small-pox, and per consequence, to vaccination, which, it is alleged, in such cases cannot be made to take. Such cases are not generally supported by good evidence. There are a number of cases on record of persons in whom vaccination was not made to take, who subsequently died of small-pox. It is plain, therefore, that we can never be justified in concluding that a person is insusceptible to small-pox, or incapable of being vaccinated, until at least all other modifying conditions are certainly disposed of. Vaccination is a matter of too much importance to be lightly treated in any case.

The operation of vaccination, and the various instruments which have been devised for its performance, are so familiar to all, that a description would be superfluous. The operation essentially consists in exposing the virus to the absorbent vessels. This should be done with as little irritation as possible, and so as not to cause a flow of blood, lest the virus be carried off. The disease, too, is so well described in the text-books as to need no elaboration at our hands. The proper time at which lymph should be taken so as to obtain it in the most efficient state for propagating the disease, and the manner of preserving it, are also important considerations. The facts bearing on these questions go to show that the younger the lymph is, the greater is its intensity, and all parties condemn the use of lymph taken on or after the tenth day. The lymph of a fifth-day vesicle, when it can be obtained, it has been stated never fails. But there is danger of irritating the vesicle overmuch, if tampered with too early. The secretion is most abundant on the eighth day, and if taken at this time it is generally effectual, while there is less risk of irritating the vesicle. Irritable sores are also sometimes produced by draining the vesicle too much. Hence some persons hold that the vesicle

should never be meddled with; that the scab, only, should be used. There is, after all, an unaccountable difference in the intensity of lymph taken from different subjects, whatever the precautions; but, as a general rule, infantile lymph is more to be depended upon than the lymph taken from adults. For the preservation of lymph many ways have been devised. In Germany, some importance is attached to preserving it on ivory-points, but there is no reason to believe that this precaution is in any respect better than the common practice in this country of collecting it on quills. In this latter form Dr. Loines—who has probably had more experience on this subject than any one in the United States—informs me that he finds no difficulty in preserving it in well-filled and tightly-stopped bottles, for a period of time varying from four to six months; being careful to keep it in a temperature not above fifty degrees. It will keep about equally long in capillary tubes, or between plates of glass, with the edges well sealed. It may be preserved for a like period of time in the scab, covered with foil or packed in wax. Some writers contend that this last form is the most certain of all, if it has to be subjected to the temperature of tropical climates. It has recently been stated that the virtues of the scab can be preserved for a long time dissolved in glycerine. Dr. Loines informs me that he has tried six specimens thus prepared, opened at different intervals—from one month onward—they all failed. In spite of every precaution, vaccine virus is frequently uncertain; and the causes of its frequent failure are beyond any present known means of investigation. However effectually heat and air are excluded, there nevertheless appears to be an inherent quality of decay which defies all of our efforts, and holds out inducements for continued investigation.

That vaccination is, *when properly performed*, the most potent and beneficent prophylactic of disease ever discovered, no one possessed of even the most rudimentary knowledge of medical science will pretend to doubt. But there are many points in its pathology yet open to the devotees of scientific research; and the more time and thought we devote to the subject, the more important does it appear. The liability of man to one of the most loathsome diseases that was ever visited upon the human race demands the constant vigilance of the medical profession; and immeasurable be the guilt of any community, if it fail to secure the complete and efficient vaccination of all its members.

3. OF THE MEASURES NECESSARY TO SECURE EFFICIENT VACCINATION.

The progress of State medicine in some European countries—already referred to—encourages us to hope that ere long sanitary science may become an element in American legislation. Few persons, however, who have not tried it, can appreciate the obstacles, both in and out of the medical profession, to the advocates of sanitary measures. Unfortunately, among ourselves, there are some who take no further interest in such matters than to oppose, tacitly or otherwise, all such efforts. They thus become the co-operators of incompetent persons, and unite their influence with those who would recognize no such thing as a bad vaccination, or who would, in a contract for its performance, place it on a level with the supplies for the alms-house, and so bestow the job upon the lowest bidder. Such influences as these tend, in the first place, to delay legislation for the protection of public health; and in the next place, so to embarrass it as to render it ineffectual when it is obtained. So far as legislation has been tried in this country, it has met with the same fate as that already referred to in England.

Dr. Snow, of Providence, writes that "The laws of this State" (Rhode Island) "give all necessary powers to boards of health for the prevention of contagion when small-pox exists, by removing the sick to the hospitals; by placing a guard around infected houses, and other similar provisions; but they have no provision to prevent the disease by vaccination, except that town councils are required to offer free vaccination to all who *choose* to avail themselves of it, *as often as once in five years*. In Providence, free vaccination is provided every Saturday during the year; and a city ordinance also provides that no child shall enter the public schools without a certificate of successful vaccination.

"Such are the laws in relation to the subject in Providence, and it will be readily seen that they must fail to accomplish the object desired, viz, the early vaccination of every individual in the community. A large number of persons, from ignorance of its importance, or from criminal neglect of their duty, will constantly fail to avail themselves of the free vaccination which is offered. It is only when small-pox appears that they begin to realize the importance of vaccination, and give attention to it.

"The provision for vaccination, before entering the public schools, is of very great benefit, and many children are vaccinated for the first time, when they enter the schools, at the age of five years. But some children do not attend these schools; and as about seventeen

hundred children are born in the city every year, if none were vaccinated until the age of five years, we should constantly have several thousand children in the city who were not protected from small-pox."

In Massachusetts there is a similar, though more stringent law, than that of Rhode Island, yet it is lacking in all the provisions requisite to an effective vaccination, inasmuch as it takes no cognizance of competency for its effectual performance.

In the City of Philadelphia there is an ordinance of similar import to the laws of Rhode Island and Massachusetts. "Believing it to be only one step forward," writes Dr. Jewell, "I have remarked—and every intelligent man will surely endorse the sentiment—that a still higher standard, embracing more adequate provision, is demanded, before a perfect report of the successful state of vaccination in our city can be exhibited. The ordinance now in force is purely benevolent in character, and strictly voluntary in its import. It offers gratuitous vaccination to every individual, and provides an easy method to secure the gift. Unfortunately, however, what with apathy and indifference with some, and prejudice on the part of others, this inestimable sanitary blessing is too often refused to render it an entire security against the introduction of small-pox."

Such is the present inefficient state of legislation on the subject of vaccination. Let it not be supposed, however, that in finding fault with this wanted progress, I mean to condemn what has been attempted. Far from it. They are steps in the right direction, and it is the duty of every member of this Society, aye, every man who has any regard for human health, to help along the good work until such measures are instituted as will secure the universal application of vaccination—the greatest of all sanitary measures—to every person in the community.

To suggest such measures as are necessary for this purpose in the absence of a fixed system of laws for the protection of public health in general, is to take for granted that such laws will be forthcoming. And, from indications that are now manifest, there is reason to believe that the time is not far distant when the friends of sanitary reform in New York and Brooklyn will be assisted to wipe out the disgrace which now attaches to these cities, not only for a continued epidemic of small-pox, but for otherwise being among the most unhealthy cities of the world.

We have a State Medical Society which most opportunely meets at the capital of the State simultaneously with the State Legislature. If that Society could be induced to appoint a committee selected with

reference to different localities, whose duty it should be to promote sanitary reform in the State, the effect would doubtless greatly assist the friends of sanitary reform where the reform is most needed, as well as do much towards obtaining necessary sanitary laws for the whole State. First among these *necessary* laws are such measures as will secure effectual vaccination. In the plans to effect this object:

1. All schools of learning, public and private, all benevolent, penal, and other institutions, should be invoked, as part of the machinery, to carry out the purpose to be accomplished.

2. All medical institutions should take special pains to teach the practice and pathology of vaccination, and every candidate for graduation should be required to produce satisfactory evidence of a thorough knowledge of vaccinia before receiving his diploma or license.

3. A general Vaccinating Board should be constituted under the auspices of the General Board of Health, which Board should be responsible for an efficient organization to secure universal and perfect vaccination and revaccination as often as required.

4. Legally qualified medical men only should be permitted to vaccinate, and a sufficient number of these should be appointed wherever required. Registers should be kept by all who vaccinate, subject to inspection by members of the Board.

5. The Health Officer of every community should also be an Inspector of Vaccination, and upon him should devolve the duty of giving certificates of vaccination, and *not* the vaccinators. It should also be the duty of the Health Officer, with competent aid under the auspices of the General Vaccinating Board, to inspect the community at stated periods.

6. No person should be admitted to membership in any school, public or private, week-day or Sunday, or into any asylum or institution whatever, without a certificate of vaccination.

7. "The laborer is worthy of his hire"; let him not be engaged by contract and paid with a grudge.

QUARTERLY REPORTS ON MEDICAL PROGRESS.

REPORT ON MATERIA MEDICA AND THERAPEUTICS.*

BY DR. L. ELSBERG.

1. *On the Medical Properties of Persian Taft-Root.* By Prof. C. SCHROFF. (Æsterr. Zeitschrift für prakt. Heilkunde, VII., 27, 28, 29, 1861.)
2. *Radix Caincæ in Dropsy.* By JOSE GENOVES Y TIO. (El Siglo Medico, 23 June, 1861.)
3. *On some Effects of Cubebs but little known.* By M. DEBOUT. (Bulletin de Thérapeutique Médico-Chirurg., LXI., July, 1861.)
4. *Triticum Repens in Irritable Conditions of the Bladder.* By HENRY THOMPSON. (Dublin Medical Press, October 23, 1861.)
5. *The Alleged Dangers which accompany the Inhalation of the Vapor of Sulphuric Ether.* Report of a Committee of the Boston Society for Medical Improvement. (Boston, 1861.)
6. *Dilute Sulphuric Acid to Prevent and Arrest Asiatic Cholera.* By Dr. McCORMAC. (Dublin Medical Press, October 23, 1861.)
7. *On Chlorate of Potassa.* By SAMUEL R. PERCY, M.D. (American Medical Times, December 14, 1861.)
8. *Calomel in Dysentery.* By W. G. BRUCE, M.D. (Boston Medical and Surgical Journal, December 5, 1861.)
9. *Quinine as a Prophylactic against Malarious Diseases.* Report of a Committee of the U. S. Sanitary Commission. (New York, 1861.)
10. *Bromide and Iodide of Potassium in Epilepsy.* By Dr. WILKS. (Hospital Reports by Jonathan Hutchinson and J. H. Jackson, M.D.; London Medical Times and Gazette, December 21, 1861.)

1. Dr. Polak, physician of the Shah of Persia, sent a root known in Persia under the name of Rish-e-Taft, *i. e.*, Taft-root, for examination, to Prof. Schroff, and the latter has, in a very able and interesting essay, published the results of his investigation. We will only mention here, that Taft-root must be regarded as identical with *Scopolia Mutica*, as a narcotic, acting primarily on the brain, causing delirium and unconsciousness, constantly dilating the pupil, and bearing a special relation to the vagus nerve. Just as the genus *scopolia* is botanically a transition from *hyoscyamus* to *atropa*, so does the taft-root pharmacodynamically and toxicologically also stand between these two. For

* It having been proposed to divide the *Domestic and Foreign Summary* Department of the MONTHLY into "Reports on the various Branches of Medicine," each report to be derived from American as well as foreign sources, I willingly contribute the following, only regretting that the haste in which it had to be prepared, of necessity excludes all claims to a desirable comprehensiveness. Expecting at this moment to follow up the present with a regular quarterly report, I hope to be able satisfactorily to portray the contributions made to *Materia Medica and Therapeutics* through the current periodical literature.

medical use, the same indications would be required as for hyoscyamus, belladonna, or stramonium. It is, however, so powerful that one grain of the powdered bark of the root must represent a maximum dose, gr. $\frac{1}{32}$ th the minimum, and gr. $\frac{1}{6}$ th the average. An alcoholic extract proved five times as powerful as the bark. Experiments were made on rabbits, and accidentally on the author's boy-servant, who poisoned himself (not fatally, however,) with less than a grain of the alcoholic extract.

2. Of all remedies applicable in dropsy, Dr. Genovés y Tio awards the first rank to the cainca-root, as being powerfully diuretic, slightly purgative, and always tonic. The powdered root may be given daily, in the dose of a drachm or more. A wine of the root has also tonic, but no diuretic and cathartic properties.

3. Aside from the known effect of cubebs upon the genito-urinary mucous membrane, Debout claims for it: (1.) A locally stimulant effect upon the gastric mucous membrane, in consequence of which, the secretion of the gastric juice is increased, and the other functions of the stomach called into greater activity; it is useful, hence, in dyspepsia with flatulency, in consequence of gastric atony, as well as when, in cases of gonorrhœa, balsam of copaiva no longer agrees. To increase this effect on the gastric mucous membrane, one gramme of nitrate of bismuth may be given with every dose of the cubebs. (2.) In small doses, so that it is well borne, (two grammes, three or four times daily,) cubebs exerts a decidedly sedative influence on the cerebro-spinal nervous system, and is very useful in cases of dizziness and weakness of memory; also in chronic inflammation of the neck of the bladder and deep parts of the urethra. The cubebs must be freshly powdered. The dose varies between $\frac{1}{2}$ and $\frac{1}{12}$ gramme, daily.

4. An ounce of the dried and cut underground stem, properly called "root," of the well-known grass, *triticum repens*, is infused in a pint of boiling water for an hour. The liquor removed by straining has been given, unmixed with any other remedy, in quantities varying from twelve ounces to a pint during the twenty-four hours, in several doses. The taste of the infusion is rather agreeable than otherwise; it produces no nausea or derangement of the stomach.

In vesical irritability produced by inflammation of the prostate and neck of the bladder; in severe gonorrhœa, and especially when the inflammation extends backward; in the pain and spasm caused by calculus, and by aggravated stricture of the urethra, as well as in some cases of obscure disease of the bladder, the good effects of the infusion have been very marked, and it has proved far more efficacious

than the buchu, which may fairly be esteemed the most widely applicable and generally useful of our officinal remedies of this class in such circumstances. In cases of prostatic enlargement in elderly patients it has been of service, but less frequently than in the conditions above named. It has also afforded great relief in renal calculus.

In short, wherever micturition is very frequent or painful, depending on hyper-sensibility of any part of the urinary passages from acute or subacute inflammation, with signs of its presence in the urine itself, the symptoms are mostly materially relieved, and the urine becomes clearer. If improvement is produced at all, it is generally very soon after commencing the medicine; and if none can be observed in four or five days, it is not worth continuing to employ it.

I believe it is important that the plant should be gathered in the spring, shortly before the leaves appear; the stem is then to be slowly dried without artificial heat, and cut into short lengths for use. The infusion obtained from material so treated is superior to that made from plants gathered indiscriminately at any time, and, also, to the infusion made from the *triticum repens* which is imported by the herbalists for the purposes of French pharmacy in this country.

5. Of the action of anæsthetics on the system we have but an imperfect and inconclusive knowledge. The following statements are cited from the work of Lallemand, Perrin, and Duroy, already referred to. This recent and elaborate treatise depends for its facts upon numerous experiments on animals, and upon such carefully conducted researches as entitle it to confidence.

1st. Anæsthetics are neither transformed nor destroyed in the system, but are rapidly eliminated from it, chiefly by the lungs, and to a limited extent by the cutaneous surface. Chloroform and amylene being insoluble in water, no traces of them are ever found in the urine. Sulphuric ether being more soluble, a small quantity of this may be detected by reagents in the renal secretion.

2d. The blood and the organs of animals dead from *etherism* (the name given to this special intoxication by the above-named authors) contain the anæsthetic agent employed, the presence of which is easily determined by special chemical research; and the following figures show in what proportion the principal viscera contain the anæsthetic, in reference, for each of the agents employed, to the quantity found in the blood:

SOURCE OF ANALYSIS.	CHLOROFORM.	SULPH. ETHER.	AMYLENE.
Blood.....	1.00	1.00	1.00
Cerebral Substance	3.92	3.25	2.06
Liver	2.08	2.25	1.00
Muscular Tissue	0.16	0.25	Traces

From this it appears that anæsthetics accumulate in the cerebro-spinal system.

3d. It is not easy to explain the deaths from chloroform and amylen, or from ether, (as sometimes seen in the lower animals,) but it would seem probable, both from the phenomena which they present and the experiments which have been made, that they are the consequence of an abolition of the functions of the nervous system, and not of asphyxia.

The general conclusions which have been arrived at by the Committee may be summed up as follows:

1st. The ultimate effects of all anæsthetics show that they are depressing agents. This is indicated both by their symptoms and by the results of experiments. No anæsthetic should therefore be used carelessly, nor can it be administered without risk by an incompetent person.

2d. It is now widely conceded, both in this country and in Europe, that sulphuric ether is safer than any other anæsthetic, and this conviction is gradually gaining ground.

3d. Proper precautions being taken, sulphuric ether will produce entire insensibility in all cases, and no anæsthetic requires so few precautions in its use.

4th. There is no recorded case of death, known to the Committee, attributed to sulphuric ether, which cannot be explained on some other ground equally plausible, or in which, if it were possible to repeat the experiment, insensibility could not have been produced and death avoided. This cannot be said of chloroform.

5th. In view of all these facts, the use of ether in armies, to the extent which its bulk will permit, ought to be obligatory, at least in a moral point of view.

6th. The advantages of chloroform are exclusively those of convenience. Its dangers are not averted by its admixture with sulphuric ether in any proportions. The combination of these two agents cannot be too strongly denounced as a treacherous and dangerous compound. Chloric ether, being a solution of chloroform in alcohol, merits the same condemnation.

Dr. C. T. Jackson, one of the Committee, objects and excepts to the clause in this report in which "all mixtures of ether and chloroform" are denounced; viz., to the words, "the dangers of chloroform are not averted by admixture with sulphuric ether," and to the terms "treacherous and dangerous compound" of ether and chloroform. He believes that a mixture of four measures of ether and one meas-

ure of chloroform may be employed without danger, or with very little danger, and that the risks from chloroform are diminished more than four-fifths by this combination. He believes it to be necessary to have an anæsthetic agent of less bulk than ether, and not so dangerous as chloroform, for army uses, and is satisfied that this mixture, which he has employed and prescribed, completely answers the purpose required.

6. Dr. McCormac, of Belfast, believes he has established on the sure basis of experience, that the exhibition to each individual of one drachm of dilute sulphuric acid every morning in some aromatic vehicle, coupled with the observance of ordinary sanitary rules, will avert the outbreak, or if existent, arrest the further propagation of Asiatic cholera.

7. Dr. Fountain's high expectations of the great value of chlorate of potash in phthisis are not likely to be realized; but O'Shaughnessy's experiments showed how an animal that was nearly dead from administration of poisons which injured the quality of the blood, was quickly revived by this remedy, administered in the way in which it acted most energetically and expeditiously, namely, by injection into the veins. And we saw that in a short time the salt had a diuretic effect, causing the urine to pass copiously, and that some of it was detected unchanged in this fluid. Would it not produce the same results in the human species, in poisoning by the inhalation of the gas of carbonic acid, sulphuretted hydrogen, hydrocyanic acid; and could it not be successfully applied in the recovery of drowned persons? The diseases in which of late years this remedy has been most successfully employed are diphtheria, and ulcerative or gangrenous sore throat. In diphtheria it has been probably used more largely by Professor Jacobi than by anybody else, though latterly he has used chlorate of soda in preference to chlorate of potash, not only on account of its greater solubility, but because, as he informs me, it is more mild in its effects. In these diseases, it is used not only as a wash and gargle to the mouth and throat, but it is also taken internally in considerable quantities. Whether it acts, as has been so repeatedly asserted, by giving up a portion of its oxygen to the blood, I will, after what you have heard, leave you to decide; but we do know that it is not all decomposed, as some of it is found in the urine, saliva, fæces, and sweat, unchanged. Professor Tully and other eminent men reject the theory that it imparts free oxygen to the blood. It is my opinion that it acts rather by its unity as a saline, possessing its own peculiar action, than by decomposition. That it produces a

florid color to the blood, without being decomposed, we have abundant proof. There are symptoms in typhoid fever that are much relieved by its careful exhibition. When, in this disease, the urine is found to be scanty and high-colored, with the brain dull, owing to this scanty secretion, this remedy given in moderate doses, freely diluted with water, for twenty-four or forty-eight hours, will generally be found to give great relief by its restorative and diuretic action. I have seen it of great service in cases of scurvy, where the gums and lips and skin were of a livid color; and it may have acted in the manner that Dr. Garrod asserts that these salts act—by supplying potash to the blood; and if it acted in this way, it must have been decomposed. It did act as a free and efficient diuretic. In mercurial stomatitis it is a very successful remedy, both as a wash, and when taken internally, but it is not by any means a specific. In syphilis, it has been found of but little service. On the whole, it is perhaps the best remedy we have for buccal inflammations and for ozæna.

It is an interesting question to ask, but one which has yet to be answered, What is the difference in the therapeutic effects of chlorate of potash, chlorate of soda, nitrate of potash, and nitrate of soda?

When taken in any considerable dose, it depresses the heart's action, frequently reducing the pulse twenty or more beats in the minute; this it does by its refrigerant and antiphlogistic powers. That it possesses tonic properties, as claimed by Fountain, and others before him, is entirely out of the question, excepting so far as its base may serve as a restorative hæmatic.

In what manner does chlorate of potash act, when taken in small, or medicinal doses; and what are its effects and *modus operandi* when taken in inordinate doses? We have seen by the experiments of O'Shaughnessy, that it brightens the color of the blood; that it revived animals when poisoned by medicines that acted on that fluid; and we have seen that a part of it, at least, traversed the system, and passed from it in the same state in which it entered it, thus producing its effect by its unity, not by decomposition. We have seen, again, by the experiments that I related to you, that in certain states of the system decomposition does take place, and that both base and acid are used for the reparation of tissues, and that this decomposition takes place only so long as it is needed as a restorative hæmatic; and that as soon as the system is saturated with it it appears in the urine, and after a while passes off also by the bowels. We learn, also, from the large experience of Professor Jacobi in the Dispensary, that it is the best remedy we at present possess for the various forms of inflam-

matory sore mouth, both when used as a wash, and given internally; and that though it frequently fails to afford relief, it is one of the best remedies in diphtheritic exudations, and in mercurial ptyalism. The latter fact is verified by the previous experiments of Herpin, Blache, and Ricord. That it is no *specific* in phthisis, and, in fact, that it frequently does injury in that disease, we learn from the observations of Köhler, Flint, Gay, and others.

As to its effects in large doses, we see that it may even be fatal, and that death may be produced by its action on the kidneys, and upon the stomach and bowels. In the cases related by Tully, in which one ounce was taken at a dose, there was a great uniformity in the symptoms produced. In one instance, in one hour after taking an ounce, the pulse fell from seventy-two to fifty-six, and was considerably smaller and weaker, and in five hours the pulse had fallen to thirty-six. It produced, also, a severe, heavy, and oppressive pain in the stomach and bowels, with free and painful alvine evacuations. Even on the second and third days this severe and oppressive pain was experienced, and was only relieved by large doses of clear brandy, and excessively large doses of opium. If the opium was omitted, the pain returned, of a lancinating and sore character, with intolerance of the slightest pressure. The violence of the symptoms passed off after a copious diuresis, but it left the person with flatulence and other dyspeptic symptoms, which lasted for some time. The treatment in these large doses should be large quantities of warm flaxseed tea, the hot bath, and blistering with ammonia over the kidneys, with large doses of opium and ipecac.

Professor Jacobi has kindly furnished me a most elaborate culling of the German journals, on the effects and uses of this salt, and I am very sorry that I have not time to present these interesting notes to you, especially as Professor Jacobi's own very extensive experience with the salt has enabled him to make an excellent selection of what was worth mentioning. I hope to give you a collation from these notes at a future time. Dr. Jacobi's individual experience with this remedy is perhaps more extended than that of any other person amongst us; for in the German Dispensary, his clinic, and private practice, I find he has notes of its administration in about two thousand cases, and, as I have before said, he uses it to a great extent and with good success, both internally, and as a gargle and wash, in the various forms of stomatitis. In mercurial stomatitis, Dr. Jacobi amply verifies Ricord's experience, and has met with almost unvarying success in keeping off salivation. From the first day of a mercurial

treatment for syphilis, he has given chlorate of potash or chlorate of soda in drachm doses, without any abatement of the effects of the mercury, and no salivation, even where the mercury has been given from four to six weeks. Dr. Jacobi informs me that about three years ago he took two ounces of chlorate of potash in divided doses during two days. During the first day, there was nausea during the whole time, the urine was increased, free salivation all day, slight diarrhœa, and loss of appetite. During the second day, the nausea was more intense, a constant spitting, a very sore feeling in the intestines, diarrhœa increased, with general uneasiness and irritability; he was not fully over its effects for several days. But Dr. Jacobi says there are but very few to whom he would give this dose. As to its detection in the secretions, Isambère found it in the saliva five minutes after taking it, in the urine in ten minutes; he found it, also, in the milk, tears, nasal mucus, and perspiration, but not in the fæces or semen.

8. We hear much talk, in this our day, in derogation of *mercury* in all its forms. The common people, in general, have a sort of superstition about this drug. Some have been induced to regard it as the sum of all medical villainies, and are inspired with a holy horror whenever it is spoken of in their hearing. While, on the other hand, there are those who regard it as necessary in some desperate cases where extraordinary means are required to stay the hand of death. They think it a most powerful remedy, which should be used only in very obstinate cases. My experience with mercury has proved it one of the mildest and most efficient remedies in the whole list of the *materia medica*. In dysentery it is the only remedy that has proved satisfactory in my hands. Some have recommended "*podophyllin*" as a "substitute" for calomel, especially in this disease. But as a disordered liver is, in my opinion, the essential part of the affection, my experience in the use of *podophyllin* at once forbids its administration in my practice; for experiment has proved to my mind that it has no action whatever upon any of the hepatic organs. Besides, it is nauseating, disagreeable to take, and only augments, in a most marked degree, the dysenteric pain and discharges. Now calomel, on the contrary, is easy of administration, easy in its action, and *certain to act in the right direction*. With it I have treated many and severe cases of dysentery—that of my own among others—and in not a single instance has it ever failed me; and in not a single instance have I ever witnessed any untoward symptoms from its use, in *any* disease. In dysentery I commonly use it as follows: R.—Hydrarg. chlorid. mit., ℥j.; opii pulv., gr. iij. M. Div. in chart. No. 6. Dose, one powder

every three or four hours. With this I succeed in not only arresting the discharges, but in curing the disease. Some disapprove of calomel in the "acute stage" of dysentery, but I have found it of uniform value in *all* stages. Let others try it, and report results.

9. "In conclusion, it may be fairly assumed, even from the evidence thus imperfectly and hastily collated, that the power of quinine as a preventive of miasmatic disease is fully established as a medical fact; and that it can be employed, not only with entire safety, but with the greatest advantage, even to the saving of life, by healthy persons exposed to malarial influences. Viewed in the light of humanity, as well as of economy—both of men and money—the prevention of disease is of far greater importance than its cure, and your Committee venture to express the opinion that intelligent and judicious action on this important subject, at the hands of the proper authorities, would save much sickness and many valuable lives during the present campaign." [To this we add the deductions from the experience of nine years' use of quinine in tropical malarious districts, recently communicated to the *American Medical Times*, viz.: (1.) That no serious harm to the system ensues from the long-continued and judicious use of quinine. (2.) That quinine, given as a *prophylactic*, will *certainly prevent the developments of miasmatic disease*, and neutralize malaria already in the system. (3.) That the amount of quinine required to maintain a status of health under malarious influences is much less, when used as a prophylactic, than as a curative after development of miasmatic disease. (4.) That the amount of quinine required as a prophylactic is more uniform, than as a remedy after attack of malarial disease. (5.) That quinine will not always restore to health a person *after repeated attacks* of malarious disease, but will *frequently fail* to prevent malarial cachexia, especially if not removed from the miasmatic influences. (6.) That cold, clear infusion of coffee is the preferable diluent for the morning dose, and whiskey for the evening dose of quinine as a prophylactic. (7.) That quinine dissolved in spiritus nitri dulcis produces very happy effects when administered during paroxysms of malarial fever.]

10. Dr. Wilks thinks that he has found the bromide and iodide of potassium to be "singularly efficacious in those cases of epilepsy which are due to a local affection, arising either from syphilis or injury," as well as where "epileptiform fits arise from lead-poisoning."

He gives thirteen cases illustrative of the exhibition of these remedies in this disease. The dose employed was usually three grains three

times daily. Two of these cases are considered as definitely cured, six as improved, and five as giving no satisfactory results.

"Since using this remedy, Dr. Wilks added, now for two or three years, and in a large number of cases, he had undoubtedly had more success than heretofore, being fully aware, he said, of the remarkable fact that epileptics generally seem to be better on any new remedy, whatever its nature may be; and also that even should it exert a real influence, the benefit is often only temporary. The *rationale* of this success is connected, we imagine, with the fact that many cases of epilepsy depend on a local affection of the bones or membranes, which the remedy removes by its absorbent powers."

QUARTERLY REPORT ON PHYSIOLOGY.

By Prof. R. CRESSON STILES, M.D.

1. *Experiments on the Motions of the Heart.* By M. MAREY. (Gaz. Méd. de Paris.)
2. *Researches of Prof. Austin Flint, Jr., into the Motions of the Heart.* (Am. Journal of Medical Sciences for October.)
3. *Report of a Case of Muscular Atrophy, accompanied with Disease of the Spinal Cord.* (Beale's Archives of Medicine, October.)
4. *Ataxie Locomotive Progressive.* By M. HIP. BOURDON. (Archives Gén. de Médecine, November.)
5. *Case of Neuralgia dependent on Fibrous Growth of the Nerves.* (Arch. Générales de Méd., November.)
6. *Sub-Periosteal Resection.* (Acad. des Sciences, Paris, Oct. 14th.)

Amid a multiplicity of isolated observations and experiments bearing upon the progress of physiology, contained in the last quarter's journals, a decided advance may be discerned in more than one department of the science. Although the growth of a science, like that of organized beings, proceeds by imperceptible increments and gradations, it is none the less marked within definite periods, and appears more distinct when we confine our attention to the separate members of which it is constituted.

Several articles embodying the results of patient research, with unquestionable preparatory fitness for observation on the part of the authors, have appeared within the above period on the *Motions of the Heart*, and the *Circulation*. In order that the bearing of these upon the progress of our knowledge may be fairly recognized, it will be necessary to present the questions in dispute, with various authorities on the subject, which we will do as briefly as possible, taking as our

guide and aid to memory the best treatises on the subject with which we are acquainted.

The spirit of opposition and obstinacy which met Harvey's announcement of the results of ten years of careful, able, and honest study of the heart's rhythm and the circulation, has not failed to propagate an uninterrupted series of misapprehensions and perversions on this subject. These have not been due so much to the errors of observation of physiologists, as to the dogmatism of practical physicians, unused to physiological research, compelled daily in the management of disease to reason from inadequate data, and having preconceived theories and modes of practice to support.

The doctrine of Harvey, respecting the action of the heart, which was the faithful record of what he had a thousand times observed on different classes of animals, has been summed up as follows: "The heart is seen to present alternations of motion and rest. At the moment of action it rises to a point, and strikes the walls of the chest with a perceptible shock. At the same moment it contracts in all directions, but principally in a lateral one; so that, while diminishing in volume, it appears longer and narrower. At the moment the heart contracts, its ventricles expel the blood through the arterial openings. There can be no doubt of this, for if an opening be made in the ventricles, the blood is seen to escape forcibly on each contraction of the heart. It is then at the same moment that the heart contracts, the point rises, the impulse is produced, and the blood expelled."

When the discovery of the application of *auscultation* to the recognition of diseases of the heart gave a practical bearing to the physiology of its activity, it became the ground of violent, unreflecting partisanship, as well as of serious investigation. The chief point at issue was the cause of the impulse, although the mode of formation of both the first and second sounds was warmly contested.

At the very outset we are met by a grave perversion of the generally recognized explanation of the heart's activity, in order to meet the demands of an incipient and tentative method of investigation into the heart's pathology. *Laënnec* adopted the views of Harvey and Haller respecting the coincidence of the impulse with the ventricular systole, and attributed to it the first sound, but found himself compelled to renounce their plainest teachings in explanation of the second sound, which he attributed to the contraction of the auricles. Harvey had accurately described the auricular contraction as immediately preceding that of the ventricles.

Hope recognized the true origin of the second sound, and adopting

the views of Laënnec respecting the first, supported his teaching by numerous experiments. He attributed the first sound to the sudden tension of the mitral and tricuspid valves, and of the muscular fibres of the heart, prolonged by the sound of muscular contraction. To us this seems the true explanation of the first sound, the nature of which it is impossible to attribute to one sole and single cause.

Rouanet attributed the heart-sounds exclusively to the play of the valves; the difference in the size of the auriculo-ventricular and the semilunar valves serving to explain the difference in pitch and duration of the first and second sounds.

Bouillaud explained the second sound by an active diastole of the ventricles, which, tending to form a vacuum, closed suddenly the semilunar valves. In this he fell back upon the doctrine of Galen, retrograding beyond Harvey and Haller. Galen thus describes the aspiration exerted by the heart during what he represented as its active diastole: "Attrahendi facultatibus præditum, arripiens ac veluti exsorbens influentes materias citissime suorum ventriculorum excipit."

While there seemed no divergence in the results of experiment respecting the coincidence of the impulse with the ventricular systole, M. Beau, the distinguished physician of La Charité, threw a new theory in the very teeth of experimental revelations, which he has zealously advocated, even to our last advices, gaining numerous adherents both in France and America, in spite of the opposition of opinion on the part of the Dublin, London, and Philadelphia committees, appointed to investigate the question of the relation between the heart's action and the sounds perceived on auscultation, on which they all substantially agreed, and all differed completely from M. Beau. According to the last-mentioned authority, the point of the heart does not rise nor project in any manner during the ventricular systole, but the impulse results from the systole of the auricles, which is also the cause of the first sound.

1. The recent experiments of M. Marey, to which this short sketch but serves as a prelude, have accomplished all that could be asked of experimental physiology in the investigation of the questions at issue, and have set further theorizing respecting them at rest by the force of accurate demonstration. Two years ago we listened to M. Marey's earliest communications to the Society of Biology, at Paris, and marked the zeal and mechanical ingenuity manifested in his researches, which have yielded such admirable results. In spite of the impatience of the venerable President, M. Rayer, of occasional reclamations of

priority on the part of Mr. Brown-Séquard, referring to various publications in various parts of the world, and of the distraction of the Society, M. Marey continued to prosecute his labors, and to present their results. In the recent experiments on the heart's rhythm, to which we refer, he was ably seconded by M. Chauveau, of Alfort, the author of an excellent treatise on the "Comparative Anatomy of the Domestic Animals," and of valuable monographs in several departments of experimental physiology. M. Marey conceived that by a simple application of the principles and contrivances which had served him in his investigations upon the pulse, it would be possible to record the varying pressures within the cavities of the heart, with their comparative periods, with a precision far surpassing the grosser methods of experimentation before employed. In all investigation into the heart's mode of activity, it has hitherto been necessary to open the thorax, thus producing lesions calculated to disturb the rhythm of an organ which sympathizes so closely with all portions of the body, so that we find a recent author asserting that "there is manifestly but one correct mode of study"—"that is, to expose the heart in living animals during its action, and observe its movements." But M. Marey has obviated this necessity. Through an opening in the jugular vein of a horse, as near as possible to the heart, he introduces tubes, filled with air, and closed at each end by a flexible membrane, into both the cavities of the right heart. The pressures exerted on the membranes within the cavities are instantaneously transmitted to the recording indices in connection with the membranes closing the other end of the tubes, and the times and intervals of pressure are recorded on a revolving cylinder or regularly moving slide, on a principle well known both in physics and physiology. The increments and intervals of pressure are thus *written* in a series of undulating lines, just as the arterial pressures are recorded by the well-known Kymographion, and may be compared for their different source, in all their gradations, at every instant. By comparing the lines traced by the auricular and ventricular activity, the instantaneous contraction of the auricle is fairly contrasted with the sustained pressure due to the activity of the ventricle, while the auricular contraction is seen to precede the ventricular by a very short interval, as announced by Harvey and Haller. But M. Marey does not stop here. He causes the impulse to be recorded simultaneously with the pressures within the heart. To this end, he introduces an empty bladder through a small opening within the parietes of the chest, opposite the point of impulse, and having afterwards distended the bladder

with air, by means of the tube in connection with it, brings, as before, the membrane closing the opposite extremity of the tube in connection with a recording index, which marks the times of given pressure on the same vertical line on the moving slide, with the simultaneous activity or repose manifested by the auricles and ventricles. The coincidence of the impulse with the systole of the ventricles thus receives a demonstration beyond the possibility of cavil, and the contradictions to this view, so strangely advocated even at the present time, are silenced.

A translation of a portion of M. Marey's paper, from the *Gazette Médicale*, will better explain the results of his experiments. After describing his apparatus and its application, and presenting the figures traced by it, he says: "Let us now examine the succession of the movements recorded by the several lines traced (on the sliding-scale.) It is evident that whatever is found on the same vertical line is synchronous, since the levers are all equal, and exactly superposed. Besides, points of comparison have been taken with the greatest care, so as to avoid all error. Let fall a perpendicular at the point where the line marked by the auricle indicates the beginning of the systole, and it is seen that the line falls into that of the full diastole of the ventricle, and that it precedes considerably the point of the second line, which marks the ventricular systole. The same want of coincidence between the systole of the auricle and the impulse will be observed in all the pulsations; therefore the impulse of the ventricle cannot be produced by the auricular systole."

"Let us now examine the onset of the ventricular systole, and from each of the points which correspond to it, let fall a perpendicular, cutting the third line, that of the impulse; we observe that between the commencement of the systole and that of the impulse there is the most perfect synchronism."

"It is in the following manner that the impulse is produced: at the commencement of the systole, the ventricle which was relaxed and rested lightly against the thoracic walls becomes suddenly hard and globular; it then presses strongly against the parietes, and during the whole systole maintains this pressure, which slightly diminishes as the ventricle diminishes in volume in emptying itself. Then comes the diastole; the ventricle becomes soft, and the pressure against the thoracic parietes ceases suddenly; at the same time that, in the ventricle itself, the exalted tension arising from the systole ceases suddenly. Thus is recorded on the lines traced a perfect coincidence between the end of the systole and the end of the pressure against the thoracic parietes, which might be called the *duration of the impulse*.

"Lastly, if we compare the relative duration of the auricular and ventricular contractions, it is seen that the first is very short, while the second is much more prolonged. As it respects the repose of the whole organ, while the auricle, as well as the ventricle, are relaxed, it is also quite long; but in the horse, which was subjected to experiment, it had not quite its usual duration, on account of a greater frequency of the pulse than was normal. But the greater frequency has the effect of diminishing the period of repose of the organ."

In thus recording the application of an ingenious apparatus to the study of the heart's activity, and the results obtained, according so closely with the most authoritative interpretation of its phenomena, and contradicting so plainly the opposing views which, under the sanction of a few great names, have distracted the opinions of the profession, we believe that we chronicle a real progress in this department of physiology. We can see but little difficulty in realizing all the conditions of the greatest accuracy in the structure and disposition of the apparatus employed in these experiments. The oscillations of the membrane closing the outer extremity of the flexible tube introduced into the heart must be synchronous with the pressures within its cavities; the only care required is in the adjustment of the recording apparatus, so that what is really synchronous shall be recorded on the same perpendicular. We have had frequent occasion to catheterize the cavities of the right heart on the lower animals, and have observed the jets of blood from the auricular and ventricular systole, and can see no practical difficulty in the way of recording their respective pressures on an animal of the size of the horse. While few arguments of value can be drawn from the action of the heart in fishes, reptiles, and birds, which can serve to explain the activity of the human heart, the strict anatomical resemblance between the latter and that of many of the mammalia indicates a similar concordance in their functional activity.

2. Prof. Austin Flint, Jr., has published in the October number of the *American Journal of the Medical Sciences*, a series of researches tending to support the views of Riolan, Borelli, Winslow, F. Queye, Pennock, and Moore, of the Philadelphia Committee, and Dalton, respecting the lengthening of the heart during the systole. Prof. Flint has also invented an instrument by which, even at a distance, the elongation during the systole may be readily recognized. It is a simple contrivance, by which the long arm of a lever amplifies the oscillations of the short arm, kept by elastic bands in contact with the point of the organ. By a canula introduced into the ventricle between the muscular fibres,

the jet of blood is seen to be synchronous with the motion of the lever, indicating the propulsion of the point. The instrument, simple as it is, has been called the *mekeoscope*. We question whether the term has sufficient periosteum to ingraft it permanently into scientific technology. Prof. Flint's view of the play of the valves and the production of the sounds is expressed in the following extract from the article just indicated: "When the ventricles act, they exert a force sufficient to overcome the arterial pressure, which keeps the semilunar valves closed; and they close at the same time the auriculo-ventricular valves, producing one element of the first sound of the heart. The systole of the ventricles ceases; its pressure is taken off; the arterial pressure closes the semilunar valves, producing the second sound; the venous pressure opens the auriculo-ventricular valves, and keeps the orifice patent until the succeeding contraction of the ventricles." Prof. Flint takes decided ground against the hypothesis of an active diastole of the heart. He says: "I believe that all physiological authors agree on this point, though Dr. Wood, late of the University of Pennsylvania, does, or at least did, hold the opinion, that the heart hardened during the diastole. One who examines the heart in action cannot be mistaken on this point." In this view, Dr. Wood but espoused a theory advocated by many high authorities, old as Galen, and supported by a no less distinguished name in experimental physiology than that of Magendie. We recollect well the zeal and instance with which our honored instructor, Dr. Wood, espoused the theory of an active elongation of the muscular fibres of the heart, and of the capillaries. He rarely theorized, but in this instance was in the habit of representing the sarcous particles of the ultimate muscular fibrils, as similarly electrified, when a repulsion would ensue, and the fibre would elongate; while supposing the alternate sarcous particles only to be electrified, attraction and shortening would result—an illustration in which he was preceded by Darwin, in his *Zoonomia*. Our knowledge of the nature of muscular activity is vague enough to admit of such bold theorizing; but we are, I think, sufficiently well acquainted with the *physical* constitution of the muscular fibre to be warranted in taking strong ground against an active diastole of the heart, or of the capillaries. The histologist entertains but slight respect for this doctrine, although supported by so high authority; he would be as likely to expect the lengthening hair of a hair-hygrometer to exert a force to drive back the recording index against the force of gravity, or the arm to be extended by the action of the biceps muscle, as to admit the generation of mechanical force by the elongation of elements of such tenuity, flexibility, and semi-solidity as the muscular fibres. The endow-

ments of the anatomical elements are not capricious and varying with variations in locality; and when but one mode of action is recognized in the muscular fibre throughout the widest extent of its distribution, it would be unphilosophical to endow it with another when it happens to be present in a situation where an additional endowment would be convenient to meet theoretical exigencies. For Dr. Wood, inflammation is an *exaltation of vitality*; to make his theory consistent, he required an active diastole.*

The experiments of M. Marey have completely set at rest the hypothesis of an active diastole of the heart, and we are able to follow a simple course of reasoning in explanation of the heart's sounds. Recognizing when force is exercised, it is natural to ascribe the sounds resulting to the periods of its exercise; recognizing an exercise of force by the muscular fibre of the heart in but one movement, viz., the systole, we attribute to this movement the first sound, while the resilience of the yellow elastic tissue of the arteries yields the force sufficient to fully explain the second.

The observation of pathological phenomena, those experiments performed by disease on the human frame, has not been without fruit in other departments of physiology. It is a grave error to regard physiology as summed up by experiments on the lower animals, as an inoffensive, unauthoritative, innocent play with vital laws, foreign altogether to the great interests of practical medicine. On the contrary, it is the science of which pathology is but the distorted, maimed, and sickly offset. Physicians, engaged from the earliest period of their studies in the contemplation of the morbid and aberrant, are liable to regard pathology as an independent science, having its own laws and principles of supreme authority. They are in danger of forgetting the narrow circle by which their studies and aims have been bounded, and instead of representing to themselves disease as only an aberration of the natural laws of organization, to be understood only by a thorough acquaintance with those laws, and to be treated rationally only by the application of physiological principles, they fall under the sway of dogmas, old women's recipes, favorite authorities, and intense veneration for antiquity, either in years or teaching.

3. The recognition of the coincidence of definite alterations of structure in the central nervous system, with definite pathological phenomena, cannot fail to elucidate many of the obscure points respecting the normal activity of its centres, and it is in this direction that we may

* We have elsewhere endeavored to show that the meteorologist has as great a claim to satisfaction when a thunder-storm is defined to be an *exaltation of the weather*, as the scientific physician when inflammation is denominated "an *exaltation of vitality*."

expect most valuable additions to our present knowledge, foreshadowed by the researches which we have now to bring forward. Beale's *Archives of Medicine* for October contains the report of an interesting case of muscular atrophy accompanied with disease of the spinal cord, the microscopic examination of which was made by J. Lockhart Clarke, (well known for his researches on the anatomy of the central nervous system,) revealing alterations of structure, which appear at first sight inadequate to account for the symptoms, as the cord appeared quite healthy to the unassisted eye. A somewhat similar case is recorded in the *Archives Générales de Médecine*; one of "ataxie locomotrice progressive," accompanied by manifest lesions in definite portions of the spinal cord, the microscopic appearances of which are, as in the case of Mr. Clarke, faithfully represented by plates. The latter article is reported by M. Hip. Bourdon, as presented to the Société Médicale des Hôpitaux. We are confident that the records of these two cases, showing anatomical lesions in explanation of what were considered essential disorders, will give a new impulse to the study of the anatomy and pathology of the spinal cord. The gradual wasting of the muscles, with want of co-ordination in their activity, was in both cases found to coexist with pathological alterations in the posterior portion of the cord. In the case investigated by Lockhart Clarke, localized lesions were observed in the posterior gray cornua, consisting in a foreign deposit in its substance, most abundant on the side on which the muscular atrophy was most marked. Amyloid corpuscles were found abundantly in the vicinity of the spinal canal, and under the membrane of the fourth ventricle, which was thickened by an abnormal epithelial growth. Mr. Clarke's own words will best make known the bearing of his observations.

"With regard to the pathology of Dr. P's case, the wasting and loss of power in the muscles of the arms and hands, must be considered, I think, to have originated not in muscles themselves as a specific muscular disease, and as the consequence of some peculiar defect of nutrition, but in the spinal cord, as the result of some peculiar degeneration and softening of particular points of the gray substance. By the history of the case, we learn that the loss of power and the pain *preceded* the wasting of the muscles, and that there was that muscular contraction, with flexure of the joints, which is frequent in softening of the nervous centres. The *upper* extremities *alone* were the parts affected; lesion of the cord was found only in the cervical region. *Both* upper extremities were involved in the disease, but the *right* was more so than the left; on both sides there was lesion of the

spinal cord, but most on the *right* side." "I have little hesitation in declaring that if the cord in the case now under consideration had been examined in the way that cords have usually been examined, it would probably have been pronounced healthy, and that the disease would have been chronicled as a case of 'paralysie musculaire atrophique,' accompanied with pain; for in some places, the lesional spots, though numerous, were so small as to be quite imperceptible to the naked eye." "There may be very obscure structural changes in the gray substance of the cord, or perhaps only in the ganglia on the posterior roots of the nerves, that may affect the nutrition of the parts to which they are subservient, without interfering with the functions either of sensation or motion; and in cases like the one now in question, where the lesions occur in small isolated spots, the limitation of disease to particular muscles, or even to particular fasciculi of any one muscle, could be explained, I think, by the particular distribution of separate nerve-fibrils within the gray substance."

4. In the case reported by M. Bourdon, the progressive paralysis was found accompanied by a marked degeneration and hyperæmia of the ganglia on the posterior roots, of the roots themselves, and of the posterior columns of the cord. Sensation was not affected, nor was pain present; proving that a deep degeneration may coexist with preservation of delicate nervous endowments. According to M. Bourdon, the disorder had its origin in the ganglia of the posterior roots, and was propagated from these centres to the posterior roots and the cord. The control of the posterior segment of the cord over muscular nutrition seems proved by these records, and must be taken into consideration in our estimation of the results of experiment.

It has quite recently been proved that the cilio-spinal region of the cord exerts its control over the iris through the sympathetic, only by its posterior segment. Galvanization of the anterior, although resulting in violent muscular contraction, has no influence over the diameter of the pupil.

5. Another instance of the value of accurate observation on the pathological anatomy of nervous disorders follows the case of M. Bourdon in the *Archives*. A case of violent and rebellious neuralgic pain of long duration was found, on microscopic examination, to be accompanied by a fibrous growth of new formation, a diffused neuroma among the peripheral branches of the affected nerves. Extirpation of the affected part was followed by immediate recovery.

Should these observations lead to a more thorough study of the nervous alterations which give rise to many so-called essential diseases

of the nervous system, they open a new field for a rich harvest of facts in this interesting but uncultivated department of physiology.

6. Practical testimony continues to be given to the value of the physiological researches of M. Ollier on the regeneration of bone by preservation of the periosteum. At the session of the Academy of Sciences, of Paris, of October 14th, M. Maisonneuve presented the specimens and plates of six new cases of sub-periosteal resections, all attended with a successful result. At the same session, M. Demarquay brought forward two cases of the same, one of which was for a necrosis of the femur. In our own country, also, surgeons are not idle in affording testimony to the value of the impulse thus given to surgery by physiological discovery.

REVIEWS AND BIBLIOGRAPHY.

A Book About Doctors. By J. CORDY JAEFFERSON, Author of "Novels and Novelists," "Crewe Rise," etc., etc. Reprinted from the English Edition. New York: Rudd & Carlton, 130 Grand Street. London: Hurst & Blackett. MDCCCLXI.

Physicians, of all other men, give themselves the least holiday. Christmas and New Year's alike, professional calls must be made, patients must be prescribed for, scenes of sorrow must be witnessed, just as if they were not festal days, when all the world were forgetting the cares of daily life, and giving themselves up to leisure or pleasure. But while there are imperative duties which will not be laid aside at convenience for a day or a week, still, we may, without slighting them, allow our thoughts to wander a little on days like these, from their sombre routine of study and analysis, into the green fields of imagination, or of pleasant gossip, and be all the better men and sounder thinkers for it. It is with this view that we propose to indulge both ourselves and our readers in a stolen glance into the hidden delights of this most taking book "About Doctors"—the doctors of Merrie Englands in the olden time. And while we enjoy a quiet laugh at the oddities and foibles of these quaint old boys, let us not forget, where it is due, to bow reverently to genius and the spirit of earnest inquiry, struggling upward amid the superstitions and errors of its day. We shall have need enough for posterity to look leniently upon our own

absurd theories and mistaken dogmas, much as we pride ourselves on the advances that science has made even in our own day. One little moral we may deduce in anticipation—that he who follows our noble calling *merely* for filthy lucre's sake, will be remembered, if he have brains enough to make himself remembered, only to be ridiculed or despised; while he who enters upon it with an earnest desire to further its great ends, will be had in memory as a world's benefactor.

Chapter I., entitled "SOMETHING ABOUT STICKS, AND RATHER LESS ABOUT WIGS," is a proper prelude to the portrait gallery, giving us an idea of the costume and appearance of these worthies in general, and greatly assisting in our appreciation of them individually.

The physician's cane, invariably seen in all old pictures of medical worthies, and generally greatly magnified in caricatures of them—as see the copy of the "Undertaker's Arms," by Hogarth, facing the title-page of this work—is described as being "long as a footman's stick, smooth and varnished, with a heavy gold knob or cross-bar at the top."

"This knob," we are told, "in olden times, was hollow, and contained a vinagrette, which the man of science always held to his nose when he approached a sick person, so that its fumes might protect him from the noxious exhalations of his patient." We have seen the time when we could have wished for such a cane ourselves.

The author supposes the barber's—once the surgeon's—pole to have been intended to represent the staff which the patient held in his hand while being bled; the blue and red stripes indicating respectively venous and arterial blood, and the white, the bandage. This is somewhat fanciful, especially as even in those days of heroic bleeding, we are not told that they were in the habit of opening arteries in the arm.

For a young physician, the gravamen of a wig must have been a god-send, for when

"Each son of Sol, to make him look more big,
Had on a large, grave, decent, three-tailed wig.

* * * * * * *

In reverend wigs old heads young shoulders bore,
And twenty-five or thirty seemed three-score."

With what satisfaction would a graduate of to-day, whose cheek is as smooth as the sheepskin which proclaims him to be a "vir ingenuus," and who finds that even spectacles of the greenest hue fail to make him sufficiently reverend to hope to command a practice, disguise his youth in one of these voluminous head-pieces! The quack,

who occasionally shows himself on Broadway in a wig and small-clothes, is probably a pretty clever representation of the English physician of three hundred years ago. It was an odd custom, that which prevailed among physicians previous to Charles II's reign, of making their visits on horseback, but seated "sideways, like women." We are not at all surprised to hear that after the Restoration, every London physician who either was or wished to be successful, exchanged this mode of progression for a "little coach and two horses." In Queen Anne's time they got to cutting a great dash with their chariot and "four," or even "six." We wish that we could put enough faith in the good sense of our fellow-creatures to suppose that the author is mistaken in imagining that people employ a physician who drives a carriage, sooner than one who does not, simply for the sake of having the carriage seen in front of their door; but we fear we must allow such to be the case, even in our own country, which we honestly think is less given up to snobbishness than dear old England. "A physician without a carriage," he tells us, is there "looked upon with suspicion," and "marked down as a *mauvais sujet*, in the same list with clergymen without duty, barristers without chambers, and gentlemen whose Irish tenantry obstinately refuse to keep them supplied with money." The unfortunate man is certainly not so low in the social scale with us. However, we may say, for the benefit of beginners, that a young medical friend has assured us that a horse and gig doubled his practice the very first year that he sported it.

The bitterness of the following little piece of irony is not one whit overstrained, as many an industrious and intelligent, but impecunious young physician, can testify to his sorrow:

"On the whole, the carriage system is a good one. It protects stair carpets from being soiled with muddy boots, (a great thing!) and bears cruelly on needy aspirants after professional employment, (a yet greater thing! and one that manifestly ought to be the object of all professional etiquette!")

To complete the picture of the old physician, we must, on cold December days, give him a muff; truly, a delectable invention, when, as at this frigid season, one enters his patient's room scarcely daring to touch his icy fingers to the wrist, lest he should bring on a chill.

In Chapter II., however, we learn that there were a race of physicians in Britain prior to these big-wigged gentry, who adopted a more attractive style of dress, for Chaucer clothes his doctor in crimson and sky-blue. Among these are mentioned Linacre, founder, and first President, of the College of Physicians in Henry VIII's time;

Caius, whom Shakspeare is thought to have shown up in the "Merry Wives of Windsor;" Mayerne, physician to at least two French and three English sovereigns. The reason of his popularity with crowned heads is not difficult to divine. "He recommended a monthly excess of wine and food as a fine stimulant to the system;" certainly a pleasanter prescription than his "Balsam of Bats."

It seems almost desecration to mention in the same breath the sagacious mind of Harvey, who was contemporary of the latter. The following description calls up, perhaps, rather a different figure from that we generally associate with the discoverer of the circulation. It is by Aubrey: "He was not tall, but of the lowest stature; round-faced, olivaster (like Wainscott) complexion; little eye—round, very black, full of spirit; his hair was black as a raven, but quite white twenty years before he died." He was one of the first coffee-drinkers in England. He is described as "very cholericque," and "apt to draw out his dagger on every slight occasion." Like many another, the scalpel has made him more famous than the dagger. Good old Bulleyn, the botanist of Queen Elizabeth's day, has left a very readable work in his "Book of Simples." Among them could hardly be included the "*Electuarium de gemmis*," which contained eleven precious stones and metals, rubbed up with aromatics, and had the effect, as might be expected, of making kings and noblemen bold-spirited. Who would not be bold after swallowing diamonds, pearls, and sapphires?

Thomas Browne, so well known as the author of "Religio Medici," the most remarkable book of its day, seems to have been the original "Tom Brown at Oxford." Both his son and grandson followed him honorably in the profession. He is described as having been all that a gentleman should be; as modest as he was cultivated; simple in life and unostentatious in dress. A greater contrast cannot be imagined than that offered by his literary opponent, Sir Kenelm Digby, "courtier, cook, lover, warrior, alchemist, political intriguer, and man of letters," whose genius, however, was too versatile to allow of his rising to great eminence as a physician. But he gained no little notoriety by a "Sympathetic Powder" which he invented, which possessed the wonderful power of healing wounds on simply moistening a portion of the clothing of the wounded man with a solution of it, at however great a distance he might be from the scene of operation. The author, speaking with some horror of Sir Kenelm's Receipts for Cookery, says oddly enough, it seems to us, reading it in these Christ-

mas times, "Minced pies are made (*as they still are amongst the homely of some countries*) of meat, raisins, and spices mixed."

Sydenham and Heberden have hardly the space given them that their distinguished merits would seem to entitle them to; while Sir Hans Sloane, whose name is comparatively unknown on this side the water, is considered worthy of a chapter, to which the two before mentioned are but pendants. He succeeded Sir Isaac Newton as President of the Royal Society, was physician to George II., and enjoyed the honor of being the *first medical baronet*. In an Englishman's eyes this is of course enough to elevate him above a man of greater genius, but who could not prefix his name with a "Sir." In this connection an amusing extract is given from the records of the "Royal Society" of the time of Charles II. For example:

"His Grace (the Duke of Buckingham) promised to bring into the Society a piece of a unicorn's horne." And,

"Sir Kenelm Digby related that the calcined powder of toades reverberated, applied in bagges upon the stomach of a pestiferate body, cures it by severall applications."

"June 26th," certain gentlemen "were appointed" "to torment a man presently with the sympathetick powder"—the same powder of which we have already spoken.

Sir Humphrey Davy, in five shirts and five pairs of stockings, and coat, breeches, and hat of a lively green, angling by the river-side, would hardly be recognized by any of us as the astute philosopher and keen inquirer into the secrets of nature.

Apothecaries and grocers seem to have somewhat commingled their several businesses in Queen Elizabeth's time. Three of the directions given them by good old Bulleyn might be well hung up in their shops to-day.

"THE APOTICARYE

"1.—Must fyrst be clenly."

"13.—That he neither buy nor sel rotten drugges."

"17.—That he meddle only in his vocation."

They soon found, however, that they knew quite as much as the doctors, and were of course not at all disposed to confine themselves to their "vocation;" and so, for a while, doctors and druggists quacked it along, side by side, each vending their own nostrums, waging all the time a bitter warfare upon one another, the history of which the author gives us under the name of the "Dispensarian Campaign."

But if the reader supposes that when doctors and "apothecaries" vied with each other in charlatanry, there were no *quacks* proper—men

who, for impudence, knavery, and ignorance, entirely eclipsed the regular profession—Chapter VI. will undeceive him on that point. Itinerant quacks traversed the country districts, on horseback, or in chariots, haranguing the gaping crowds in the market-places, and fleecing them with the best possible grace. When they erected platforms from which to proclaim the virtues of their nostrums, they were called “mountebanks.” The she-quacks, Chap. XVI., seem to have been quite as successful and much more nasty than their rivals of the sterner sex. Think of Joanna Stephens receiving five thousand pounds, which to-day would be equivalent to ten thousand, at least, (the greater part of it by vote of Parliament,) for making known her secret preparations for the cure of gravel, which consisted of such trash as this: “The Pills consist of snails calcined, wild-carrot seeds, burdock seeds, ashen keys, hips and hawes, all burnt to blackness—soap and honey.” Mrs. Mapp, also called “Crazy Sally, of Epsom,” was another vulgar hag, who was petted by the fastidious aristocracy of London, and worked wonderful cures, principally in the bone-setting way. An interesting article in our present number, on “Animal Substances used in Medicine by the Ancients,” gives one some idea of the disgusting nature of many of the nostrums of those days. Fæces seem to have been held in especial esteem, and the more feculent the more efficacious.

The two well-considered chapters on “Imagination as a Remedial Power,” (XIV.,) and “Imagination and Nervous Excitement,” (XV.,) discuss the old ideas of Planetary Influence and the Efficacy of the Royal Touch—the first Mesmerist, Greatrakes, a Round-head Cavalry Officer, Puritan gentleman, Christian man, and finally self-deceived miracle-worker—the Yankee trick of Perkins’ Tractors, one of which, by-the-way, reposes quietly on a shelf in our own closet—and the second Mesmerist, Mesmer himself, an ignorant, impudent pretender, who grew rich on other men’s ideas, and turned Paris mad by the sheerest imposture. The author says, most pointedly and justly, in treating of this and kindred delusions: “To electro-biologists, spirit-rappers, and table-turners the same arguments must be used as we employ to mesmerists. They must be instructed that phenomena are not to be referred to magnetic influence, simply because it is difficult to account for them; that it is especially foolish to set them down to such a cause when they are manifestly the product of another power; and that all the wonders which form the stock of their conversation, and fill the pages of the *Zoist*, are to be attributed not to a lately discovered agency, but to nervous susceptibility, imagina-

tion, and bodily temperament, aroused by certain well-known stimulants."

The "Temple of Health," which raised its impudent front above the Thames on the Royal Terrace, as late as the termination of the Revolutionary war, with its gorgeous and grotesque furniture, its luxurious apartments, its music and perfumes, its shrine of Apollo, containing "the irresistible and salubrious influences of electricity, or the elementary fire, air, and magnetism;" and, to cap the climax, its "celestial bed, provided with costly draperies, and standing on glass legs," which insured to married couples who slept on it a beautiful progeny, at the rate of £100 per night, were the product of the fertile brain and cunning knavery of James Graham, M.D., of Edinburgh, whose successes were equaled only by his blasphemy. The following little trick of his is practiced in our own town to-day, and with wonderful results: "Over the doors of the principal rooms, under the vaulted compartments of the ceilings, and in each side of the centre arches of the hall, are placed walking-sticks, ear-trumpets, visual glasses, crutches, etc., left and here placed as most honorable trophies, by deaf, weak, paralytic, and emaciated persons, cripples, &c., who, being cured, have happily no longer need of such assistances."

The last quack mentioned brings us pretty nearly down to our own times. John St. John Long was the son of an Irish basket-maker, and began his career as a "Historical and Portrait Painter," in Limerick. Subsequently, seeking a wider field in London, he was reduced to coloring anatomical plates for the professors of one of the surgical schools, and thus picked up a smattering of anatomy, and got hold of a caustic fluid, which he turned to good account. Taking a large house for the reception of patients, he made it known that he had discovered a liquid which, while innocuous to a healthy person, would irritate and blister the skin of one whose internal organs were affected with any disease. Especially after consumption was it most furious; producing excoriations, out of which the tubercles were drawn almost bodily. His success pecuniarily, was most amazing. Sir Astley Cooper alone is believed to have received such immense sums; and even a conviction for manslaughter, under the most aggravated circumstances, did not diminish materially his popularity. He died young, in the full tide of prosperity, of the very disease which he professed to cure. His handsome face, prepossessing manners, and ready wit, made him an immense favorite with the fair sex, all of whose advances, however, he resisted, for the very good reason that he was already

married, and did not care to risk an action for bigamy, little as that for homicide had damaged him.

The many good stories that are told of Radcliffe, and Mead, and Abernethy, and Akenside, of doctors who loved a good dinner, and doctors who loved a full pocket, and doctors who loved not wisely, but too well, we have only time to advert to. The chapter on "Fees" (Chapter IX.) shows a considerable insight into human nature, as variously affected by health and disease. The English custom of considering the fee a voluntary offering commensurate with the patient's gratitude—a pleasant fiction, certainly—is set down as a piece of most artful policy, designed to increase the amount of the physician's receipts; and certainly the argument which he advances, that the man who feels his life in danger will gladly treble his fees to insure the careful attention of his medical adviser, is one of great force. Our way of doing things here in America, allowing our patient's gratitude to cool off, even down to the zero point, and then sending in a bill for value received, is the most unfortunate that could possibly be devised.

At the close of the sixteenth century, the ordinary fee was ten shillings, and at the commencement of the eighteenth it had not materially increased. The story of the small beginning of Sir Astley Cooper's gains, and their gradual increment, is pretty well known. From five guineas in the first year, they ascended by slow stages to a hundred pounds in the fifth year, and a thousand in the ninth. For many years he kept it at the pretty average of £15,000, and it once ran up to £21,000—more than a hundred thousand dollars. We should probably, any of us, be willing to "pocket the affront," as he did, of a patient's night-cap thrown at us, if it contained a comfortable draft for 1,000 guineas.

From Chapter XXIV., on "Literature and Art," we learn that John Locke, Goldsmith, Smollett, Armstrong, Wolcot, better known as Peter Pindar, Keats, the poet, and Crabbe, were all of our gentle craft.

We are glad to see that the author has, what some of the English medical journals which ought to know better, do not possess, a proper appreciation of the country doctor of to-day. His description of him in England will answer equally well for our own rural districts: "A well-read and observant man; skillful in his art, with a liberal love of science, and in every respect a gentleman." But the country doctors of centuries gone by were certainly, as a rule, no credit to the profession. Probably few of us knew before that Andrew Borde, "author and buffoon, as well as physician," was the original "Merry An-

drew." They are, however, all redeemed and elevated by the great conception and untiring perseverance of him who conferred a greater boon on the race than any of his city brethren, and with whose picture we will bring these desultory notes to a close, as we began them with that of the not less great Harvey.

"When I first saw him it was on Hampton Green. He was dressed in a blue coat and yellow buttons, buckskins, well-polished jockey boots, with handsome silver spurs, and he carried a smart whip with a silver handle. His hair, after the fashion, was done up in a club, and he wore a broad-brimmed hat." "Such was the appearance of Jenner, as he galloped across the vale of Gloucester, visiting his patients." "Jenner was a simple, unaffected, devout man. His last words were, 'I do not marvel that men are grateful to me, but I am surprised that they do not feel gratitude to God for making me a medium of good.'"

None but a great as well as a devout mind could have been capable of such a sentiment at such an hour.

We would willingly linger longer over these pleasant pages, but neither time nor space allow. We trust we have said enough to induce some of our readers to indulge themselves in a further acquaintance with the worthies whom they commemorate, which, thanks to the enterprise of Messrs. Rudd & Carlton, they may do without the fearful drain upon their pockets which the possession of the English edition made necessary.



EDITORIAL AND MISCELLANEOUS.

Salutatory. VIVIMUS, WE STILL LIVE.—"A self-evident proposition," you may say, dear Reader, "and requiring neither assertion nor proof." But we have thought it well to state it thus objectively, for two reasons: First, Because many of our contemporaries, yielding to the pressure of these sad, sad times, no longer perform that troublesome, and yet strangely fascinating function. From North, East, South, and West, exchanges whose friendly faces were wont to greet us each month, now cease to gladden us with the light of their countenances. Some have fallen, like the soldier, bravely fighting, and left scarce a word of farewell. Others have pronounced their benediction, decently covered their head, turned their face to the wall, and

gently breathed their last; while others still, proclaim that they are not dead, only suspended, and lead us to hope to see them once again, when the stars shall be more propitious. Therefore it is that we assert our continued existence—not in a spirit of pride or self-gratulation, but rather of thankfulness, that our State and City have still so great a degree of prosperity vouchsafed to them, and that a kind Providence has thus far stayed the hand of war from our borders. Secondly, Because, not without reason, it has been surmised, in various quarters, that the unpleasant reverse was the case. The long but unavoidable delay in getting out our few last numbers, more especially that of December, the month which has seen so many decidences, has awakened the suspicion that we were among them. These delays, as we have just said, have been unavoidable, the result of the absence of the Senior Editor, on business of the Sanitary Commission, and of the unsettled condition of matters generally, of minds especially, and of the editorial mind in particular. For the former reason we have no apology to offer. The sacrifices which Dr. DOUGLAS is at present making, in giving his entire time to that very essential part of the public service, are certainly not for a moment to be put in the balance against the slight inconvenience which the individual subscriber may suffer in finding his Journal a few days or weeks behindhand. For the latter we can only express our determination that with the new year, a new order of things shall be inaugurated.

The NEW YEAR!—With what portentous aspect does it—but stop! we had quite forgotten our manners! Allow us, dear Reader, and more particularly dear *Subscriber*, to wish you the “Compliments of the Season!” May the New Year be a happy one! And until it has grown hoar with December’s frosts, may you be blessed with a sound body, a clear head, a good appetite, an easy digestion, and “a conscience void of offence towards God and towards man!” We are glad that we checked ourselves in the mournful peroration on which we were about launching. Science has no business with tears in its eyes; and besides, if we had worked ourselves up into a state of maudlin excitement on the “state of the country,” we might have roused our sensibilities to such a degree, that we should have felt a delicacy in referring to the little matter of unpaid subscriptions, which we nevertheless feel to be our bounden duty. With the nation and the war, you and I, in our mutual relationship, have nothing to do. Rather let us tell you what we propose to afford, in return for your continued patronage, during the coming twelve-month.

Our original contributors are well known to all our readers. We can promise a continuance of valuable articles from them, with the prospect of new additions to their list.

The well-selected translations from German and French authors and periodicals, which have appeared during the past year, will be followed by others of equal interest from the same sources.

In addition to this, arrangements have been made with physicians, all well known in this city, and many of them of wider fame, to furnish QUARTERLY REPORTS on the various leading departments and specialties of Medicine, conveying a clear idea of the advances which have been made in each during the preceding three months, and of their ultimate value. We call particular attention to the able Report of Professor STILES in our present number.

Dr. ELSBERG'S Reports are not a novelty to our readers, and their continuance, on the special branch of *Materia Medica*, will, we doubt not, be welcome. The amount of research which the preparation of his work on *New Remedies*, announced in our last number, has necessitated, peculiarly fits him for the department.

Among other names, we may mention those of Dr. T. GAILLARD THOMAS, on *Obstetrics and Diseases of Women*; Dr. JACOB, on *Diseases of Children*; Dr. J. J. HULL, Curator of the New York Hospital, on *Surgery*; and Dr. M. BLUMENTHAL, on the *Practice of Medicine*. Besides these regular Quarterly Reports, we shall present occasional reports on Ophthalmology, Syphilography, and other specialties. We shall aim to have two of these Reports in each number; but as our responsibility for them ends with this announcement, we shall not consider ourselves reprehensible for any failure in the promptness of their appearance. For our personal self we can only say, that if devotion can atone for inexperience, we shall not be found wanting. The high standard which the MONTHLY has ever maintained for interest, usefulness, catholicism, and professional courtesy, it shall be our aim to sustain.



SUBURBAN HOSPITALS.—St. Thomas' Hospital, in London, has been sold to the Charing Cross R. R. Co., for the sum of £296,000, nearly a million and a half of dollars; and this even is only a little more than one-third what the Governors of that institution claimed. A clever little sum, certainly, and quite adequate to build a second St. Thomas' elsewhere. But what does an R. R. Co. want of a hospital? Have things got to such a pass in the dear mother-land that passengers are not only waited upon by officious agents with offers to insure their lives against accident, as they step into the train to take a day's air-

ing in the rural districts, but also have a hospital provided (at the expense of the R. R. Co.) for them, should their little pleasure trip be brought to an untimely end by a fracture of the leg? They might find it less expensive, in the end, certainly, to provide hospital accommodations and cork legs, or even Palmer's inimitable limbs, for their victims, than to pay damages; but the moral effect upon the pleasure-seeker would be unquestionably depressing. But not so. The Company buys the premises, we presume, simply to tear them down that they may make way for the march of improvement; and the insurance-nuisance is the only death's-head which will for the present disturb the peace of the susceptible tourist. But now comes a question for the Hospital. Having pocketed its \$1,480,000, and "taken up its bed," or beds, whither shall it walk? To some point in the immediate vicinity, says the *Lancet*—where it can avail itself of the stenches of Thames sewers, the filth of gutters, and the healthful emanations arising from the operation of living performed by a large number of human beings closely crowded together under hygienic conditions not the most favorable, so that its well-established rate of mortality may not be materially interfered with. "Nay," makes answer the valiant little *Medical Circular*—rather, as it has got on its legs at last, let it continue its perambulation to some site where it can pursue its vocation with more profit to its inmates; let it leave the crowded, reeking metropolis, and seeking some grassy slope, seat itself there in the sunshine, and open to heaven's breezes, and let us see if there do not more live men and fewer long boxes go out of it than was its wont while it squatted at the foot of London Bridge.

This idea of a suburban hospital, the *Lancet* styles "Sanitary Insanity." To which the *Circular* replies that it is willing to oppose its "madness to the foolishness of its venerable contemporary." It was not to call attention to this gentle bandying of compliments that we introduced the subject, but to advert to the fact which is already beginning to be well understood in this country, that large hospitals must be located elsewhere than in the midst of densely-crowded cities. Our own city, with its immense frontage of salt water, possesses great advantages in this respect. And yet, Bellevue, even with its windows opening right on the water, and receiving almost a sea-breeze, cannot be approached without passing through a district which, even at this cold season of the year, is redolent of anything but Cologne. We may justly be proud in this regard of our noble Island Hospitals, which nothing but gross internal mismanagement can ever make unwholesome. Fresh air is deeded to them by an irrevocable decree.

The New York Hospital is now the only one of any considerable size remaining in the heart of the city, and its Governors have long had in mind the project of removing it to the upper part of the Island, where it could hope, for years to come, at least, to enjoy an immunity from crowding. All that is wanted in the city is a comparatively small Receiving Hospital, or several of them in different sections of the town, where accidents may be taken, and temporarily treated, or, if it be impossible to move them, permanently: but accidents, as is well known, constitute a comparatively small proportion of the surgical cases that are treated in any large institution—all others could quite as well go a mile or two out of town as the same distance in town.

— The proceedings of the *Academy of Medicine* for the past month have been marked by an unusual degree of interest, and a not unusual degree of indecorum. The reading of Dr. Barker's able paper on "Anæsthetics in Midwifery," and the discussions upon it, called together a large concourse of professional men, both in and out of the Academy, on three evenings. The paper itself has been already noticed in our last issue. Dr. G. T. Elliot, who occupied the greater portion of the second evening, agreed in the main with the author of the paper—the principal point of difference being as to the effects of chloroform on the nervous system; the latter considering it a stimulant, while the former regarded it as almost uniformly a depressant: a distinction probably dependent upon the differing degrees of anæsthesia which they are in the habit, respectively, of inducing.

Dr. Peaslee took exception to the thesis, that chloroform was the *safest* anæsthetic agent, as he did not consider that it had been established by the paper. Dr. Watson animadverted very strongly upon the same point, as well as upon instrumental interference in obstetrics. We must submit that the charging of one fellow-Fellow with malpractice, and another with deliberate falsehood, is a procedure scarcely consistent with the dignity of a grand scientific body, and one that ought not to have been passed over in silence by the Chair.

The extending of the right hand of fellowship, and of professional hospitalities, to the Surgeons of the French war-ships in our harbor, on the part of the Academy, was a refreshing little act of genuine courtesy, for which we are indebted to the nice perceptions of Dr. DETMOLD. We only hope that in case these gentlemen accept the invitation of the Academy to be present at its meetings, they will not be asphyxiated by the foul air of the room in which its deliberations are held, or shocked by the ungentlemanly air of many of its members.

At the meeting on Friday evening, January 3d, the annual election was held. It resulted as follows: *Vice-President*, Dr. H. D. BULKLEY; *Recording Secretary*, Dr. J. H. HINTON; *Trustees*, Drs. J. FOSTER and J. R. VAN KLEEK; *Treasurer*, Dr. J. O. POND; *Committee on Admissions*, Dr. H. D. BULKLEY; *Committee on Ethics*, Drs. A. C. POST and A. UNDERHILL; *Committee on Education*, Dr. J. G. ADAMS; *Corresponding Secretary*, Dr. J. G. ADAMS.

— The *Pathological Society* continues its labors in behalf of science in its usual business-like, unostentatious manner. At the annual election, held Wednesday evening, January 8th, the following officers were elected: *President*, Dr. T. C. FINNELL; *Vice-Presidents*, Drs. L. VOSS and D. S. CONANT; *Secretary*, Dr. GEO. F. SCHRADY; *Treasurer*, Dr. WM. B. BIBBINS. The honor conferred on Dr. FINNELL is only a well-merited recognition of the value of his collaboration for many years past.

— The *Medical Times* of December 28th notices the death of Dr. Buist, a surgeon in the rebel army, and formerly of Bellevue Hospital. We suppose that the *Times* has good ground for its assertion that this *was* the Dr. Buist who was House Physician to Bellevue. We had been at some pains to inquire into the matter, and had been credibly informed that it was not himself, but a relative of his. The Dr. Buist referred to by the *Times*, we knew intimately. He was our Junior at the Hospital, and we were thus thrown into daily intercourse with him; and a more gentlemanly, modest, unassuming, and at the same time intelligent and cultivated man, we have rarely known. If it be that he has thus early fallen a victim to this wretched rebellion, there will be sorrowing hearts at the North as well as the South. He died as a physician should, *at his post*.

BOOKS AND PAPERS RECEIVED.

Notes on the Surgery of the War in the Crimea, with Remarks on the Treatment of Gun-Shot Wounds. By George H. B. Macleod, M.D., F.R.C.S., etc. Philadelphia: J. B. Lippincott & Co. London: John Churchill. 1862.

Sanitary Commission, E. Report of a Committee appointed by the Sanitary Commission, to prepare a paper on the Value of Vaccination in Armies. Philadelphia: Collins, printer.

Sanitary Commission, F. Report of a Committee of the Associate Medical Members of the Sanitary Commission, on the subject of Amputations. Boston: David Clapp, printer. 1861.

Wheat, its Worth and Waste, with original Microscopic Illustrations. By Wm. Hand Browne and Thos. J. Hand. New York: Printed for Hand, Thomas & Co., by Torrey Brothers, 13 Spruce Street, N. Y. 1862.

THE AMERICAN MEDICAL MONTHLY.

FEBRUARY, 1862.

LECTURES, MONOGRAPHS, AND CASES.

Clinical Lecture on Cases of Local and General Paralysis. Delivered at the Bellevue Hospital. By AUSTIN FLINT, M.D., Professor of the Principles and Practice of Medicine in the Bellevue Hospital Medical College, and in the Long Island College Hospital.

GENTLEMEN—My hospital service during the present session has been unusually rich in cases of paralysis. Your attention has been called to these cases, from time to time, in the wards and in the amphitheatre. Most of the cases are still under our observation. I propose to review the facts sufficiently to call your attention to the more important of the practical points involved in the clinical history of the different forms of paralysis which the cases exemplify. I shall distribute the cases into the following groups: 1st. Cases of local paralysis; 2d. Cases of general paralysis; 3d. Cases of hemiplegia; and 4th. Cases of paraplegia. In treating of these varieties of paralysis, I shall exhibit the different cases of each variety, which are now in hospital. In the present lecture I shall limit myself to the cases of local and general paralysis.

Here is a patient affected with facial paralysis. The paralysis has already existed for several weeks. The patient is tuberculous. The muscles of the left side of the face are paralyzed, and there is a purulent discharge from the left ear.

If you compare the two sides of the face, you perceive that, although there is no distortion so long as the patient does not speak or laugh, there is a manifest disparity in appearance. The expression on the two sides differs; or, rather, there is no expression on the left side. Loss of the expression, habitual to the person affected, is one of the appearances denoting facial paralysis. What is the explanation of this? It is a wonderful fact, which I doubt not has often occurred to all of you, that of all the living persons whom we see, no two have an expression of countenance so identical that we cannot readily distinguish the one from the other. This infinite diversity of expression is due, in a great measure, to differences as regards the tonic contractions of the facial muscles. Now, when the facial muscles on one side are paralyzed, the tonic contractions on that side are impaired or lost, and, hence, the abolition of the expression, so far as it is dependent on these muscles.

If I cause the patient to talk, and especially to laugh, you will see at once a remarkable distortion. I make him laugh by simply asking him if he is able to laugh on both sides of his face. The idea conveyed by such a question as this is so ludicrous, that it rarely fails to accomplish the object. You see the mouth is drawn to the right side. This is because the muscles on this side are not antagonized by the corresponding muscles on the opposite side. If you watch the eyes for a moment, you will notice that he winks only with his right eye. I ask him to close both eyes, and you observe the left eyelids remain separated, and the patient rolls the ball upward. He is unable to close the left eye. I wish to call your attention particularly to this fact. The case is one of local paralysis; the patient has lost the control of those muscles only to which the facial nerve is distributed. In these cases, the orbicular muscle of the eye, on the affected side, generally participates in the paralysis. We shall see it is otherwise when facial paralysis occurs in cases of hemiplegia. If you notice the *alæ nasi* when I cause the patient to breathe in a forcible manner, you will see that the nostril dilates on the healthy side only.

The paralysis, as I have said, is limited to the facial muscles. The extremities on either side are not affected, and the tongue is protruded in a right line. Now, the obstruction to the transmission of volition to the paralyzed muscles, in such cases of local paralysis, may be seated somewhere in the tract of the facial nerve, or it may be seated in the cerebral centre, at the point of the origin of this nerve. It is desirable, in individual cases, to determine whether the affection

be limited to the nerve, or whether it be symptomatic of cerebral disease.

Facial paralysis sometimes precedes the manifestations of a grave disease of brain. Let me cite a case illustrative of this statement.

About a year ago I was consulted in the case of a young woman recently married, and three months advanced in pregnancy. On getting up in the morning, the face was found to be paralyzed on one side. She had considered herself perfectly well, and had been at the opera the previous evening. I saw the patient in consultation three days after this occurrence. The facial paralysis continued, and the tongue was deflected to the paralyzed side. No other muscles were affected. She was disposed to somnolency, but declared that she was scarcely ill, complaining only of slight pain in the temple opposite to the side of the paralysis. Suddenly, the next morning after my visit, while getting out of bed, she fell to the floor; convulsions and coma ensued, which continued until her death, on the following day.

In this case the facial paralysis was an event of importance, as heralding the development of a fatal cerebral disease; but, in the majority of cases, it has no such significance, and the only question is, whether it will be transient or permanent. It is obviously a matter of no little moment to decide whether the paralysis constitute the affection, or whether it be symptomatic of centric trouble of some kind. How is this point to be settled? The following points are to be attended to in endeavoring to form an opinion: Is there an appreciable tumor or swelling of any kind in the tract of the nerve, after its emergence from the stylo-mastoid foramen? If so, the paralysis is probably due to pressure on the nerve. If the paralysis be preceded by otorrhœa, as in the case before us, we may strongly suspect an affection of the nerve after it enters the internal auditory meatus. On the other hand, if there be nothing apparent to the touch or eye showing the nerve to be affected, it is to be observed whether the paralysis be confined exclusively to the muscles to which this nerve is distributed. If the tongue be distinctly deflected towards the paralyzed side, a centric affection is probable; so, if the articulation be impaired, the deflection of the uvula does not possess much value, as this is so often the case, irrespective of paralysis. Attention is also to be directed to the muscles of the upper and lower extremities on the paralyzed side. There may be distinct, although slight, impairment of control or power over these muscles, which, without close observation, escapes detection. I have known instances in which slight hemiplegia existed without being obvious, and without the

knowledge of the patient. To settle this point, cause the patient to perform diverse movements alternately of the opposite extremities, and measure the power of grasping with the two hands. Coexisting cerebral symptoms, such as pains and vertigo, are of considerable importance, as pointing to a centric affection; yet it is to be borne in mind that these symptoms may be coincident with paralysis, dependent wholly on an affection of the nerve. We shall presently see, in another case, that the coexistence of paralysis of the sixth pair of nerves with facial paralysis, denotes a centric lesion of some kind. Claude Bernard has suggested an interesting point bearing on the question under consideration. In several cases of facial paralysis, he found that the nerve of taste on the half of the tongue corresponding to the affected side was notably impaired. Sapid substances, such as quinia and citric acid, were with difficulty distinguished when applied to one-half of the tongue. He attributes this result to the communication between the facial and gustatory nerves, by means of the *chorda tympani*. In experiments on inferior animals, he has found that division of the latter nerve is followed by a similar result. In cases, therefore, in which the taste is affected, it may be presumed that the affection is either centric, or situated between the origin of the portio dura and the point at which the chorda tympani is given off.

Assuming that facial paralysis be not attended by circumstances denoting a cerebral affection, and that there are no circumstances showing pressure upon, or lesion of, the nerve, such as enlargement of the parotid gland, a tumor of any kind, disease of the ear or temporal bone, it is to be regarded as functional, and a favorable prognosis may be entertained. I have known it to occur in two instances in connection with anæmia; in one case shortly before, and in the other shortly after, pregnancy. In both cases there was complete recovery. I have known it to follow prolonged exposure of the face to the cold air, and recovery has always taken place. In the patient before you, there is probably disease of the ear involving the nerve, and the prognosis is not favorable.*

I now present, gentlemen, another patient with facial paralysis. The same diagnostic appearances are presented in this as in the other patient, viz.: the loss of expression on the affected side, the distortion when he speaks or laughs, the very slight movement in winking, and inability to close the eye. In this case, the paralysis has existed

* Some weeks afterwards the patient died from tuberculosis, the paralysis continuing until his death.

for thirteen years. He did not enter the hospital to be treated for this affection, but for disorder of the bowels. There is no probability of recovery from the paralysis; it will doubtless continue as long as he lives.

The paralysis in this case followed a fall upon the head. He does not suffer from any symptoms denoting cerebral disease at the present time, irrespective of the paralysis. We may, however, conclude that the paralysis depends not on an affection of the nerve, but on a centric lesion of some kind. What is the evidence of this? You see the eye on the affected side is affected with strabismus. The cornea is directed inwardly, and the ball is fixed in that position; he cannot roll it in an outward direction. This shows that the paralysis involves the sixth of the cranial nerves. The external rectus muscle is animated by this nerve, and it no longer antagonizes the internal rectus; hence the eye is turned inward by the latter muscle, and fixed in that position. Now the sixth nerve has its origin at a point close to the origin of the facial nerve, and, therefore, as it is reasonable to conclude, there exists a centric lesion, involving both nerves.

I wish to call your attention in this case to the appearance of the tongue when protruded. It appears to be deflected towards the paralyzed side, does it not? Is there any one here who doubts that it is so deflected? As there is no response, I assume there is but one opinion on this point. Let me show that you are all mistaken. The face in this case is habitually drawn a little to the sound side. I now, with my hand, draw backward the cheek on the paralyzed side, so that the angles of the mouth are equidistant from the median line. I ask him to protrude the tongue, and you see it is in a direct line. The appearances before were illusory. The half of the lip on the paralyzed side covering a portion of the tongue, it appeared to be deflected, when it was not in the least. This is a source of error which I do not recollect ever to have seen pointed out, and it is desirable to keep it in mind.

In conjunction with the case just presented, the case which I now present possesses interest. This patient has paralysis affecting the third cranial nerve on one side. This nerve is distributed to all the straight muscles of the eyeball except the external or abductor muscle, to the levator muscle of the upper eyelid, and to the iris, when affected with paralysis; therefore, the eye is turned outward by the abductor muscle, in consequence of the want of antagonism of the abductor muscle; the upper lid drops, closing the eye more or less, constituting ptosis, and the pupil is dilated and motionless. These re-

sults are manifested in this case. You see the eye is closed, and the patient is unable to raise the upper lid. When I raise it with my finger you see the eyeball turns outward, and the patient is unable to move it inwardly and look towards the nose. The pupil, too, as you see, is twice as large as in the other eye. When the lid is raised, however, the patient sees without difficulty.

Here, then, is a local paralysis; none other of the cranial nerves are involved. The patient has no symptoms denoting a cerebral affection aside from this paralysis. It has not been of long duration. It is probably a functional affection, and I venture to predict that it will not be permanent.*

But there is another form of local paralysis associated in this case. The patient has nearly lost the power of flexing the fingers of both hands. He is unable to grasp anything; he can flex the forearm on the arm, and carry both hands to his head. The hands do not drop as in lead-paralysis. The power over the extensor muscles is impaired, but the loss of power is especially in the flexor muscles of the fingers. Both hands are equally affected. This loss of power was preceded by pains, which were considered as rheumatic, in the upper extremities; aside from these ailments, there appears to be nothing at fault. His appetite and digestion are good. The thoracic organs are sound. He is forty-six years of age, but he looks much older than this. The hair and beard are white, and the complexion is pallid.

Now, how is this loss of power over the flexor muscles to be explained? We should at once suspect the muscular atrophy, which has of late years been studied by Cruveilhier, Aran, and others; but the upper extremities are not wasted. The muscles, however, feel remarkably soft and flabby, and I think it can hardly be doubted that they have undergone some change; in other words, the muscles themselves are affected, and the loss of power is dependent on this change, not on an obstacle to the transmission of volition through the nerves to the muscles. The fact that both extremities are alike affected goes to sustain this conclusion. Under this view, all that we can do is to endeavor to invigorate the body generally; to excite the circulation and nutrition in the affected muscles, by stimulating liniments, with friction, and to urge the patient to exercise the muscles as much as possible. It will be advisable to make trial of the electro-magnetic currents in this case.

* The patient recovered from the ptosis after the lapse of several weeks, but not from the affection of the muscles of the forearm, subsequently described.

In contrast with the case just presented, here are two patients affected with the form of local paralysis peculiar to lead-poisoning, viz., the "wrist drop." On raising the forearm of each extremity at right angles with the arm, the dorsal aspect upward, you see the hands drop. The patients are unable to raise the hand of either extremity to a level with the forearm. They can move the forearm freely, and the arm. The paralysis is limited to the extensor muscles of the forearm. If I place my hand in their palms, so that they can grip it with their fingers, I find they are able to squeeze with considerable force. The strength in all the muscles of the upper extremities except the extensors of the hands was illustrated the other day, by the fact that one of these patients carried on his back from a ward on the first floor up to this amphitheatre, at the top of the building, another patient who was affected with paraplegia! There are few of those present who would be able to perform such a feat of muscular strength.

As I have already, in connection with these cases, in a previous lecture, considered fully lead-paralysis, I will not enlarge on the subject now. I will simply remark, that the paralysis here is due to an affection of the muscles themselves. Probably the paralysis involves the presence of lead in the affected muscles. That it does not proceed from an affection of a nervous centre, is shown by the limited number of muscles affected, and the fact that the same muscles on the two sides are affected. To suppose that there exists an affection of either the brain or spinal cord so limited as to involve only the nervous fibres distributed to the extensor muscles of the forearm, and that an affection so limited exists either in both hemispheres or lateral divisions of the cord, is to suppose coincidences which might possibly occur in a single case, but that they occur in a series of cases, is inconceivable. We must, therefore, logically refer the rest of the affection to the muscles. This form of lead-paralysis is embraced in the category of symmetrical diseases, and the law of parallelism is considered as involving the pre-existence of a blood-change. We may, therefore, infer that the morbid material, the lead, is brought to the affected muscles in the blood.

I have still another case of local paralysis. Here is a man whose left hand is incompletely paralyzed; the affection has existed for two weeks. The movements of the hand and fingers are much enfeebled and the sensibility is also impaired. In other respects he is well. It is obvious that the loss of muscular power and sensibility in this case has proceeded from some cause acting on the part; and on closely questioning the patient, I find that he dates the occurrence of the

affection from a fit of intoxication. When he recovered his consciousness, he found the affected hand paralyzed. The explanation is this: While in a state of drunkenness he lay with this hand doubled under the body, and the paralysis is due to the long-continued pressure. He has had a sense of numbness in the hand, but no pain. He has been in the hospital a week, and the improvement already is considerable. The only treatment has been friction with a stimulating liniment, and use. The recovery will, in a short time, be complete.*

We meet occasionally with cases of paralysis produced in a similar way. I have known an instance in which temporary paralysis of the arm was produced by sleeping with the arm hanging over the back of a chair.

The two patients, gentlemen, remaining in the amphitheatre exemplify general paralysis. By the term general paralysis you are not, of course, to infer that all the muscles of the body are affected, since such a condition would be incompatible with the continuance of life. You are not to infer that even all the voluntary muscles are paralyzed. Such a condition, however, might exist, and life continue. Any of you who have read the novel by Dumas called *Monte Christo*, will probably recollect that one of the *dramatis personæ* is represented as affected with paralysis extending over all the voluntary muscles except the orbicular muscles of the eyes; the faculties of the mind remaining intact. Such a case was not a creation of the author's imagination. A distinguished friend and colleague of mine once related to me precisely such a case which came under his observation, and the patient recovered. But the term general paralysis is not restricted to cases of this description; it is applied to cases in which both the upper and lower extremities are paralyzed, with or without an affection of the cranial nerves.

The patient whom I shall first present is affected with general paralysis, following an injury to the upper part of the spinal cord. As the history is brief, I will read it from my Book of Records.

"James Tully, age 42, Irishman, driver of coal-cart; admitted Sept. 18, 1861.

"On the 8th of March last he fell from his coal-cart, striking on the top of the head, and the wheel of the cart passed over his neck. He got up instantly, but suffered great pain in the neck, shoulders, and chest. He states that he was obliged to sit up constantly for three

* The patient shortly afterwards was discharged, quite well.

weeks on account of the aggravation of the pain on lying down. He was also obliged to incline his head to the right side. There was no paralysis for four months. In about five weeks after the accident he was able to return to work. He was not, however, entirely free from soreness in the neck, and he found that he could not throw coals into his cart, on account of this soreness. He then took to peddling coals in a basket.

“Four months after the accident he began to lose power over the upper and lower extremities. The paralysis progressively increased, and he was obliged to quit work two weeks before his admission. The loss of power is greater on the right side. He has remained in about a stationary condition since he has been in hospital.”

He is able to walk, as you see, but with difficulty. You perceive the movements of the right limb are more difficult than those of the left. The paralysis of the upper and lower limbs appears to be about equal. With the right hand he grasps feebly, but with the left he exerts considerable force. The sensibility is everywhere intact. He has had some difficulty in urination, but there is none at present. There is no paralysis of the tongue or face. There is no soreness or pressure on the neck, and no displacement of the vertebræ.

He suffers much in the night-time from cramps in the legs and arms, and from pain in the neck and shoulders. He states, also, that he is subject to muscular tremor in the night-time, like a person with ague. His appetite and digestion are good, and his general aspect is healthful.

Since his admission he has been blistered repeatedly on the nucha, and dry cups have been several times applied. Cathartics have been given to relieve constipation. Electricity has been employed, and he has taken ergot. His condition, as already remarked, is about the same as on his admission.

Now what is the pathological condition giving rise to the paralysis in this case? That the paralysis is not due to an injury of the spinal cord received at the time of the accident, is shown by the non-occurrence of the paralysis for four months. The great pain which occurred soon after the accident, and continued for several weeks, increased by the recumbent posture, probably proceeded from meningeal inflammation; and the paralysis, subsequently developed, is to be considered as a result either of pressure by an inflammatory product of some kind on the cervical portion of the cord, or of an extension of the inflammation, with softening, to the cord, (myelitis.) The occurrence of cramps in the limbs, the muscular tremor and the continued pain, are to be

regarded as evidence of inflammatory action in the meninges of the cord.

It is not easy to form a positive opinion as regards the prognosis in this case. The fact that the paralysis has now existed for several weeks without any increase is a favorable point. If, however, it continues several months longer and no improvement takes place, the prospect will be far less favorable.

I do not conceive that, in this case, any advantage is to be derived from continued counter-irritation, or, indeed, any active medication. I cannot see any grounds for giving strychnine or employing electricity to excite the affected muscles. He is able to excite them by means of volition. He should be encouraged to do this,—to exercise the muscles as much as possible, without inducing pain, fatigue, or exhaustion. Upon this, with time, as it appears to me, our hopes of improvement or recovery are to rest.

In connection with this case I may mention that I have met with several cases of paralysis of the upper and lower extremities, more or less complete, occurring spontaneously, or, speaking more correctly, not traumatic, in which recovery has taken place. I have reported two cases observed in the New Orleans Charity Hospital; in both the patients having been for a considerable period confined to the bed; the improvement being progressive and rapid after they were taken out of bed, made to sit up, and encouraged to persevere in voluntary efforts to exercise the affected muscles. On systematic, persisting exertions of volition on the part of the patient, conjoined with friction, must be the chief dependence for restoration in most cases of paralysis, as we shall see when we come to consider cases of hemiplegia and paraplegia.

The last of the cases which I shall present to-day exemplifies a rare and interesting variety of general paralysis. It is now generally known by the name given to it by Prof. Reguin, of Paris, viz.: general progressive paralysis, (*paralysie générale progressive*.) It has also been called the paralysis of the insane.

Let me first call your attention to the characteristic appearances which the case presents. I shall ask the patient several questions, and I wish you to notice his articulation in replying to them. You see he speaks with hesitancy and difficulty. The impediment is unlike that in stammerers. He does not stammer, but he mumbles his words somewhat like a person half asleep. The embarrassment proceeds from an incomplete paralysis of the muscles employed in speech. He is much inclined to talk, especially about himself, and, from our con-

versation, it must be obvious to you that the mental faculties are weakened. They are not congenitally so, for this person was once evidently an active, intelligent man.

I will now ask him to walk two or three times across the area. You see he walks with an uncertain and unsteady gait, like a person slightly intoxicated. I saw this patient before his admission. A member of your class found him outside the hospital gate endeavoring to inquire the way to the entrance, and he brought him to me at the college. I thought at first he was intoxicated, but, finding no odor of spirit in his breath, I gave him a note to the warden, and he was admitted into one of my wards.

In order to show you how he moves the fingers, I will ask him to unbutton his vest and suspenders. You see how difficult it is for him to do this; his hands tremble, although they are not tremulous when at rest, and he fumbles for a long time before he proceeds. His movements are like those of a person whose hands are greatly benumbed with cold.

The muscles of speech and of the extremities are affected with paralysis of a peculiar kind. There is not much positive loss of voluntary power. When he grasps my hand and presses it, he exerts a degree of force which is somewhat painful. The peculiarity consists in this: he finds it difficult to combine the movements of the muscles for particular ends; in other words, to make the muscles co-operate for the performance of definite objects of volition.

This variety of paralysis is very rarely seen except among the insane. Some have contended that it never occurs except in connection with insanity. This case, as you will perceive, does not go to disprove the correctness of the latter statement. I will now read the history of the case as I have noted it in my Hospital Records:

“Harmon Sanderson, aged 46, engineer, admitted Nov. 20, 1861.

“He states that he has always been a temperate man; that he had gonorrhœa twenty years ago, and that he has never had syphilis.

“He dates his illness from Sept., 1860. He was then much exposed to cold, working with his feet constantly wet for several successive days. The first difficulty was diminished power of controlling the motions of his fingers. He found he could not readily button and unbutton his clothes. He is not aware that, at first, there was any difficulty in speech or in walking. The difficulty of controlling the motions of the fingers gradually increased, and it was not until

six months had elapsed that he noticed any difficulty in speech. Still later, he first noticed difficulty in walking.

"He says, in answer to an inquiry, that he has been deranged, and was in the Retreat at Hartford for six months. This, he says, was prior to his present malady. His memory is so imperfect, that his statements with regard to dates are, probably, not very reliable, but he is certain that the mental derangement preceded the paralysis.

"He says that his urine sometimes escapes involuntarily. When he desires to urinate, he cannot always refrain until he succeeds in unbuttoning his clothes. His urine is acid, and not albuminous.

"His appetite is good. There is no evidence of disordered digestion. The bowels are habitually constipated. With regard to the sexual function, he thinks he is not impotent. The mental powers are feeble. He recalls events slowly, and I presume their accuracy is questionable. The orderly says he manifests delirium by getting up at night and walking about the ward, and by incongruous conversation. His hearing is good, but his vision is sometimes blurred.

"Examination of chest yields negative results as regards disease of lungs and heart."

What is the pathology of this form of paralysis? It depends, undoubtedly, on some affection of the nervous system, but its connection with any uniform, definite lesions has not been established. It is a form of paralysis which offers very little encouragement of improvement. All clinical observers agree in regarding recovery as hopeless. It progresses, as the name implies, and all that is to be hoped for is a slow advancement. As it progresses, locomotion and speech become more and more impaired, and, at length, the power of combining voluntary movements is lost. The urine and fæces are evacuated involuntarily. The mind sinks into a state of imbecility. Sometimes epileptic paroxysms and fits of active delirium occur. Death takes place by slow asthenia, which may be hastened by diarrhœa, erysipelas, or gangrene of the nates. Life is sometimes destroyed by a low grade of pneumonia. The duration is found to vary greatly in different cases. It is essentially a chronic affection, but it may end fatally in a few months, or be protracted for several years.

Progressive general paralysis is not to be confounded with another affection to which it bears some similitude, viz., *progressive muscular atrophy*. The latter is an affection seated in the muscles themselves. *The muscles* undergo structural degeneration, and gradually waste. The affection seizes upon a few muscles in some part of the body, and is apt to extend to other muscles, until, at length, the whole volun-

tary muscular system may be invaded. I have quite recently seen a case with my esteemed colleague, Prof. Taylor, in which the muscles of the left upper extremity have become affected with atrophy. The muscles of the scapula are so much attenuated, that this bone is, as it were, displayed, while it is concealed by an abundance of muscular covering on the opposite side. The arm and forearm are much diminished in size, and the muscular power correspondingly impaired. This has taken place in the course of a few weeks, having been preceded, as well as accompanied, by pretty severe pain in the affected muscles.

Progressive muscular atrophy, as well as progressive general paralysis, is a hopeless affection, as regards recovery. If it invade successively the different parts of the muscular system, it proves fatal, in like manner, by slow asthenia; or, if the respiratory muscles become affected, life may be cut short by apnœa.

In the way of treatment, in our case of progressive general paralysis, the indications are, in general terms, to maintain the functions, to endeavor to strengthen the body by tonic remedies, together with an invigorating regimen, and to encourage the use of the voluntary muscles. Under a theoretical idea of the applicability of phosphorus to the treatment of certain affections of the nervous system, I have prescribed the dilute phosphoric acid, but I have no practical knowledge of its utility in this affection.*

On Cainca. By Dr. JOHN C. PETERS.

AUTHORITIES: *Frank's Magazine; Trousseau and Pidoux's Materia Medica; Vogt's Materia Medica; Dierbach's Materia Medica; Sobernheim's Materia Medica.*

SYNONYMS: *Cachinca; Kahinca; Cainana.*

Botany.—Cainca is the root of the *Chiococca angustifolia* of Martius; of the *Chiococca* or *Cainca racemosa* of Linnæus; or of the *C. Scandens* of Riedel. It is indigenous to Brazil and the Antilles. It belongs to the *Pentandria monogynia* of Linnæus; to the group of the *Coffeaceæ* of Decandolle, a subdivision of the *Rubiaceæ* of Jussieu.

Physical Properties.—The smell of the fresh root is somewhat re-

* This patient remained in Bellevue Hospital for some time without any improvement, and was transferred to the Blackwell's Island Hospital, where he still remains, without improvement.

pulsive and acrid; at first, resembling in a measure that of coffee, but subsequently pungent. The taste is disagreeable and acrid, and apt to excite salivation and nausea.

Chemical Composition.—Caincanium, or Acidum caincicum, is the active principle of the root; it crystallizes in white, shining, silk-like needles; has no smell, and at first seems insipid, but gradually develops an unpleasant, bitter, and acrid taste. Sobernheim says it is readily soluble in hot alcohol and acetic acid; but is dissolved with great difficulty in water and ether. Dierbach says it dissolves in six hundred parts of water, and in about as much ether. With alkaline and earthy bases, it forms salts readily soluble in water. François says it acts as a powerful *diuretic* in doses of five to fifteen grains. The other components are of no particular importance, except an oily-green substance, which is soluble in ether, and upon which depends the odor of the root. Other chemists have supposed that they have discovered a peculiar cainca emetin, or chiococcin, in the root.

Remarks.—In the last number (Jan., 1862,) of this journal, page 49, we read:

“Of all remedies applicable in dropsy, Dr. Genoves y Tio awards the first rank to the cainca-root, as being powerfully diuretic, slightly purgative, and *always tonic*. The powdered root may be given daily in the dose of a drachm or more; the wine of the root has also tonic, but no diuretic or cathartic properties.” These simple words sufficed to renew an interest which I had taken in the study of the effects of cainca several years ago, and which led me to procure and prepare the remedy, although I had no occasion to use it, as the cases of dropsy in which I thought of applying it all recovered under the influence of other remedies better known in this country; such as iodide of potash, benzoate of ammonia, apocynum cannabinum, digitalis, squills, &c. But there is a great deal of testimony in favor of the use of cainca in dropsy; Frank details at least forty cases in his *Magazine*, and the principal French and German writers on the *materia medica* recommend it. It may be allowable here to state that *Frank's Magazine* consists of four volumes, of upward or over one thousand pages each, and is a perfect storehouse of the most valuable and reliable facts in *materia medica* and therapeutics. It is devoted exclusively to the preservation, in a convenient form, of the records of the undoubted effects of medicines on the healthy, and the detail of cases of disease cured with one remedy only. All cases in which more than one medicine was used in effecting a cure are rigidly excluded.

To return to cainca: Dierbach says it resembles coffee and ipecac

in its action; Langsdorf and Martius compare its effects with those of *Helleborus niger*; while Loewenstein supposes that *gratiola* is more nearly like it.

Effects on the Healthy.—Wolff, Physician to the Berlin Charity Hospital, gave $\frac{1}{2}$ drachm of the powdered root in $\frac{1}{2}$ ounce of simple syrup to a healthy man, night and morning; it caused nausea, without vomiting, followed by four copious stools, while the quantity and quality of the urine remained unchanged. A robust, convalescent patient received by mistake 30 grains of pulv. rad. caincæ; he simply had two diarrhœic stools, without colic. A delicate man took 30 grains, and had three alvine passages, without colic. A robust woman took 1 drachm in the morning as a purgative, but as it had not a speedy effect, she received 30 grains more in the afternoon, and then had three copious stools, with frequent but fruitless endeavors to urinate; during the following night she had great urging to pass water, and diarrhœa, without colic. A man aged 50 took 40 grains without any perceptible effect. A girl aged 18 took 12 grains of the extract as a laxative, and had six stools without pain or colic, although almost all other purgatives, even the mildest, always produced unpleasant effects; the urine was not increased at this time, but several weeks subsequently she took another dose of 12 grains, without any effect upon the bowels, while very copious discharges of urine were induced.

Frank says it possesses undoubted purgative and diuretic tendencies; sometimes one effect is more prominent than the other, and sometimes they occur in alternation in the same subject; when both effects are produced, the diuresis generally sets in several hours after the diarrhœa has ceased. In a few very sensitive persons, discomfort, nausea, and even colic may be excited by quite small doses, while the majority experience but little annoyance from rather large quantities. After using cainca for some time, the tongue is apt to become uniformly clean and red, without losing anything in its breadth or moisture; the inner side of the cheek takes on the same dark-red appearance; if the remedy be not intermitted soon after this occurs, fever, with more or less thirst, is apt to set in. François says it is more likely to act as a diuretic when the urine is scanty, acrid, and dark in color; after the first few doses the water is apt to become lighter in color, more abundant, and the discharge no longer painful. Profuse salivation has been noticed as one of its effects. Some have thought that the pulse occasionally becomes slower while it is used. Langsdorf says it sometimes acts as an emmenagogue. Vogt thinks it possesses pretty decided purgative powers, and compares it to jalap; if given in proper

quantities, it will cause several thin, watery stools, with more or less, or little or no griping, so that it is not nearly so disagreeable in its effects as the ordinary acrid, drastic cathartics are. The purgative operation may set in in the course of three or four hours, or not occur till the end of several days, and then is generally followed by decided diuresis, by which at first dark and saturated urine is voided, and then lighter-colored water follows in abundance. If the stomach be previously irritable, vomiting, colic, distention of the abdomen, fever, and profuse watery diarrhoea, may present themselves, without being followed by diuresis or absorption of dropsical effusions. Caventon and François have noticed *tonic* properties in addition to a very decided diuretic tendency.

Formulæ and Doses.—Trousseau and Pidoux recommend the *decoc-tion of cainca*, made with 8 grammes of the bark of the root of cainca macerated for 48 hours in 250 grammes of cold water; then boiled for 10 minutes and strained. This quantity to be taken in 2 doses. This is François' favorite preparation. The *wine* of cainca is made with 1 part of the medicine to 16 parts of Malaga wine, allowed to macerate for eight days, and then filtered. *Syrup* of cainca is made with 500 grammes of simple syrup to 3 grammes and 50 centigrammes of the alcoholic extract of cainca; the extract is dissolved in a little water and filtered, then added to the hot or boiling syrup, and allowed to cool; this syrup contains 4 grains of cainca to every ounce of syrup. Beral has prepared a vinous syrup and a *saccharolé de cainca*; the latter containing 24 grains of the extract to an ounce of sugar, being the equivalent of 2 ounces of the root. The *extract* of cainca is obtained from 1 part of the medicine to a sufficient quantity of alcohol to produce one-sixth part in weight of the extract from the root. Vogt says the *bark* of the root is the only active part, and may be given powdered, in doses of from 20 to 30 grains per day, gradually increased until catharsis or diuresis is induced; he adds, that as the powder of the bark is most apt to disagree, an infusion of it, so that from 1 to 3 drachms of the active principle may be given per day, is generally preferred; or the alcoholic extract, 20 to 30 grains in every 24 hours, may be substituted. Professor Fouquier used the following formula with success in several cases of dropsy: Powder of cainca 1 drachm, powdered gum-arabic 30 grains, and honey sufficient to make an electuary; the patient took once or twice this quantity of electuary every day; the dropsies diminished, and a cure followed. Trousseau and Pidoux refer to the use of the *decoc-tion* in the proportion of 1 to 2 drachms of the root to a pint of water; or the powder in quantities of

40 to 50 grains to 2 drachms of sugar; or 12 to 24 grains of the aqueous extract. Dierbach recommends table-spoonful doses four times a day of the *vinum radici caincæ* of *Beral*. Sobernheim recommends the spirituous extract of the root, made with 12 ounces of cainca to 6 pounds of alcohol, reduced to 2 ounces of the extract, of which 12 grains represent 1 ounce of the root in strength. Also an infusion of 1 or 2 drachms of the root in 8 to 12 ounces of water, of which a table-spoonful is to be given from two to four times a day. The powder of the root, Sobernheim and Loewenstein say, acts so powerfully that it should only be given in doses of 5 to 10 grains three times a day. The extract, they assume, may be used in doses of 2 grains three times a day, gradually increased to 20 or 40 grains. Cinnamon will correct the unpleasant taste of the drug. Spirits of nitric ether will remove the nausea and vomiting sometimes caused by it. Sobernheim also recommends an electuary made with one drachm of Rad. cainca pulv. to one scruple of gum-arabic and a sufficient quantity of honey; to be given in tea-spoonful doses. The Hamburg infusion is made with from 2 to 6 drachms of cainca boiled in 20 ounces of water down to 8 ounces, then strained, and given in table-spoonful doses every two or three hours. A compound infusion has been made with 1 drachm of the root to 6 ounces of hot water, cooled and strained, to which is added tinct. scill. Ralin. 1 drachm, spirits nitric ether 2 drachms, inspissated juice of juniper $\frac{1}{2}$ ounce, syrup spinæ cervinæ (*Rhamnus catharticus*) 1 ounce; 1 table-spoonful to be given every two hours. A *tinctura caincæ ammoniata* has also been used.

General Experience in Dropsy.—According to Trousseau and Pidoux, it is in the so-called *essential* or idiopathic dropsies, or those not caused and maintained by a local organic affection, that this bark has effected the most decided beneficial results. But in symptomatic dropsies its exhibition is not useless, for it almost always removes the serous effusions; and although these accumulations of fluid are reproduced sooner or later, because the medicine cannot cure the organic diseases which maintain and excite them, still its use is not less serviceable against the often dangerous and always distressing consequences of the mechanical pressure, and the distention of the tissues, occasioned by these abnormal effusions. It is supposed to be contra-indicated in the *acute dropsies* which often promptly follow the appearance of some eruptive fevers, especially scarlet fever; as also, when there is pre-existing inflammation of the stomach and bowels. In such cases, the cainca should be preceded by diluents and antiphlogistic remedies. Vogt says it is most useful in ascites and simple

anasarca; but adds, that if Langsdorf's supposition is correct, that it possesses resolvent and emmenagogue properties, it may prove reliable in dropsies *ab obstructione viscerum et a menstribus suppressis*. Sobernheim says it has been used from time immemorial in Brazil, as a diuretic and laxative or cathartic remedy. It was first introduced into Europe by Baron Von Eschwege, while Von Langsdorf was mainly instrumental in familiarizing German physicians with its curative powers; subsequently, François, Loewenstein, Spitta, Beral, and Fouquier employed it successfully against obstinate, torpid, chronic dropsies and œdematous swellings. Wolff, of the Berlin Charity Hospital, was inclined to believe that it was only useful in slight cases, and when the strength of the patient was not reduced, as he succeeded in producing a marked diuretic action in five cases only out of nineteen, followed by removal of dropsical swellings of the lower extremities; while in twelve other cases it produced such profuse diarrhœa that its exhibition had to be withheld; but this only proves that his doses were too large. It is well to add here, that Langsdorf and Martius thought that the cathartic powers of cainca were far superior to, and greater than, its diuretic tendencies. Sobernheim infers that it is also useful in torpid menostasias, infarctions of the abdominal organs, swellings and enlargements of the liver and spleen, against chronic ulcers of the feet and legs, and obstinate skin eruptions, in all of which affections Loewenstein found it equal in curative powers to gratiola.

Special Experience in Dropsy. CASE 1.—A previously healthy, but rather thin widow, aged 40, was suddenly attacked with rheumatic fever and pains in the loins and limbs, against which the usual emetic, cathartic, and diaphoretic treatment proved unavailing, and in the course of a few weeks a serious state of things ensued. First the lower extremities, then the abdomen, and finally the whole body commenced to swell, and a general anasarca took place; the legs were so enlarged that almost all power of motion was lost, and the abdomen was so filled with fluid that she could only breathe with difficulty in an upright position. Juniper, squills, gamboge, and numerous other remedies had been given without benefit; when, finally, cainca was thought of; 2 drachms were boiled down in 1½ lb. of water, to 9 ounces, and of this one table-spoonful was given at first, three times a day; then two spoonfuls twice a day; and finally, four times in twenty-four hours; it acted first upon the bowels; causing from four to six, and finally ten to fifteen watery stools a day, followed by some diminution of the dropsy; it produced no effect upon the skin, and did not cause either nausea or vomiting. After the patient

had taken seven or eight portions of the medicine, a very sudden and copious secretion of turbid urine took place, with constant urging to micturate; the swelling abated rapidly, the respiration became easier, the abdomen grew soft and lax, and the legs thin, so that at the end of eight weeks almost all signs of dropsy had disappeared, although the patient remained very weak. Sixteen nine-ounce portions of the medicine were taken in all; she remained well for several years afterwards.

CASE 2.—A robust man, aged 45, was seized with rheumatic pains, especially in the lower extremities, followed by œdema of the feet, which quickly increased to a dropsical swelling of the whole body, attended with excessive distention of the abdomen and scrotum, extreme difficulty of breathing, constipation, thirst, and general fever. Blood-letting and antiphlogistic remedies were used, without benefit; calomel was given to the point of salivation, and a host of diuretic, cathartic, and diaphoretic remedies were used without benefit. Finally, 2 drachms of cainca, infused in 9 ounces of boiling water, were given, in table-spoonful doses, every two or three hours; there was no perceptible effect for five or six days, when profuse diarrhœa and increased secretion of urine sat in, followed by a diminution in size of the abdomen, scrotum, and legs. After an intermission of the medicine for several days, in consequence of the severity of the diarrhœa, the cainca was again given in table-spoonful doses, four times a day, and persisted in for four weeks; the diarrhœa and diuresis continued, and the dropsical swelling diminished in proportion, until the patient was quite well at the end of two months.

CASE 3.—A previously healthy and robust young woman, aged 22, took a severe cold, followed by suppression of the menses and considerable œdema of the legs and thighs; at the end of three months, after a variety of treatment, she was received into the Berlin Charity Hospital, with excessive swelling of the legs, great distention of the abdomen, with well-marked fluctuation, scanty urine, obstinate constipation, dryness of the skin, slowness of pulse, and absence of fever. Two drachms of rad. caincæ were boiled in 18 ounces of water, down to 9 ounces, and one table-spoonful given every two hours. In a few days profuse diuresis and diarrhœa sat in, followed by a perfect recovery in four weeks, during the whole of which time the medicine was taken with few or no intermissions.

The above cases were reported by Dr. Loewenstein, in 1829.

CASE 4.—A dropsical and hysterical woman was treated with cainca in the above-described manner, and recovered perfectly not

only from her dropsy, but from her nervousness and hysteria. It acted principally as a diuretic.

CASE 5.—A consumptive and dropsical lad, to whom the same doses of *cainca* were given, passed as much as ten Berlin quarts of urine per day, and recovered temporarily from the dropsy, but it returned again at the end of a few months, and he finally died of phthisis.

CASE 6.—A poor widow woman, reduced by poverty and exertion, gradually became dropsical, until her legs were so swelled that she could not leave her room; one drachm dose of powdered *cainca* was given, and acted as a powerful diuretic, producing a copious discharge of clear urine, followed by recovery from the dropsy; it did not act upon the bowels. Some time afterwards she came under observation again, with an attack of paralysis, but there had been no return of the dropsy.

CASE 7.—A man, aged 59, who lived in a damp, small dwelling, into which sunlight scarcely ever seemed to penetrate, had suffered for some time with chronic catarrh and dropsy of the legs, which finally confined him to his bed and chair; he was constipated; his urine scanty, but otherwise apparently natural. A sixteen-grain dose of ext. *caincæ* was given, followed in two days by twenty-four grains more, without perceptible effect; on the fifth and seventh days thirty grains were given in two doses, and on the ninth day twenty-four grains at once. On the fifth day profuse diuresis occurred, followed by progressive improvement; the medicine acted on the bowels once daily. On the tenth day two drachms of pulv. rad. *caincæ* were given, followed by rumbling in, but no movement of, the bowels; increased urination, and perceptible diminution of the dropsy of the legs. Then sixteen ounces of vin. *caincæ* were given in the course of four days; the bowels were moved daily; the urine was dark, but copious, and at the end of sixteen days no remains of the dropsy were visible, except some swelling of the feet; the patient was soon able to go up and down the stairs of a six-story house. On the twenty-second day thirty grains of the extract were given, without perceptible effect; but the cure was completed by forty grains more of the extract, given in divided doses. The remedy never produced the slightest irritation of the digestive organs.

CASE 8.—A woman, aged 49, was received in the Hôtel Dieu with dropsy, following fever and ague; she first took several active purgatives, without much benefit; then 6 grains of extract of *cainca*, followed by two stools and three times the quantity of urine previously

passed; on the next day she received 8 grains, succeeded by four actions upon the bowels and profuse diuresis; on the fifth day she took 6 gains more, after a diarrhœa, caused by the first two doses, had subsided; the œdema had lessened decidedly, so that her legs had almost recovered their natural size. On the sixth and seventh days she took 8 grains in two doses, and on the eighth day 10 grains, followed by profuse urination and entire removal of the swelling, so that she left the hospital on the fourteenth day.

CASE 9.—A woman, aged 34, applied at the Hôtel Dieu with dropsy of the legs, which had resisted treatment for six months; she also had sciatica, induced by working in a damp cellar. She took 20 grains of the extract with great reluctance, and quickly vomited it up; then 30 grains were infused in one pound of warm water, followed by six passages from the bowels, attended with colic and profuse diuresis during the whole night and following day, in consequence of which the right leg almost recovered its natural size, while in the left there was only a little œdema visible about the knee and ankle. On the fifth day 30 grains of the extract were given in a clyster, followed by ten watery stools and very profuse urination. Two more clysters were given on the seventh and tenth days, followed by complete recovery from the dropsy, but no relief to the sciatica. The patient was seen in good health eight months afterwards.

CASE 10.—A poor woman, aged 45, had had an attack of dropsy two years previously, which had lasted four months. She now had had dropsy of the legs for six months. On the first day she took 1 drachm of pulv. caincæ in two doses, and on the second and third days the same quantity at one time; on the second day, the urine, which had been red, hot, and scanty, became more free; and on the third day the bowels, which had been constipated, were moved. On the sixth, seventh, eighth, tenth, and twelfth days, she took 2 drachms at one dose, succeeded by increased diuresis and diarrhœa, without colic or other disturbance of the digestive organs, but simply by progressive diminution of the dropsy. On the fourteenth day she took 20 grains of the extract; on the seventeenth day 12 grains, and finally a concluding dose of 16 grains. On the seventeenth day she had ten watery stools, attended with profuse urination. She was now able to walk quite well and briskly, as the dropsy was almost completely removed. The recovery was complete.

(To be continued.)

The General Hospitals of Paris. From the French of BOUCHARDAT.

The *general hospitals* are designed for persons of both sexes laboring under *acute* diseases, and for those who have been injured or attacked with surgical diseases. All that is necessary to secure admission is the fact of being affected with a curable malady, and the patient is cared for until the cure is perfect. These hospitals are Hôtel Dieu, Lariboisière, La Pitié, La Charité, Saint Antoine, Beaujon, Cochin, and Necker. The physicians, besides, in each hospital, in turn have gratuitous consultations.

HÔTEL DIEU.—This is probably the oldest hospital in Europe. It is generally admitted that it was founded about the year 600, by St. Landry, Bishop of Paris, and that Erchinoald, mayor of the palace, contributed largely to the good work. Philippe-Auguste, St. Louis, Henry IV., and other charitable persons, amongst whom may be mentioned Chancellor Duprat, M. de Pomponne, and M. de Bellièvre, first president of the parliament, contributed much towards its enlargement.

Hôtel Dieu was established for the sick, of every age, sex, condition, country and religion. Its motto was, *Medicus et Hospes*. At every hour of the day and night they received the sick, pilgrims and mendicants; no rule existing for their admission or departure. The old population of Hôtel Dieu seemed to bear no relation whatever to the extent of its walls and number of its beds; thus, during the first eleven centuries of its existence, the slightest indication of disease among the people would bring in such a crowd of people that one can scarcely credit the accounts when the size of the place is considered. In ordinary times the increase of its population was as follows: in the reign of St. Louis, 900 patients; of Henry IV., 1,300; of Louis XIII., 1,800; of Louis XIV., 1,900. There were years when the population seemed to be unlimited. In 1709 it had increased to more than 9,000; we are assured that in 1693 they were necessitated to put twelve or fifteen sick in the same bed, which induces us to believe that the number of patients exceeded 10,000; the whole number of beds then did not exceed 1,000, of which 600 were large and 400 small. The following paragraph is extracted from the report of Bally, Tenon and Lavoisier, on the ancient condition of Hôtel Dieu:

“On account of want of room, a large number of beds were placed in the wards, and it was customary to put four, five, and even nine patients in the same bed. The dead have been seen mingled with the living. The wards and the passages are narrow, on which ac-

count the air is prevented from renewing itself; light only penetrates feebly, and the air is charged with humid vapors. The commissioners have seen convalescents mingled in the same ward with the sick, the dying and the dead, forced to leave the ward barefooted summer or winter, to respire the air without on the Pont St. Charles; they have also seen a ward for convalescents on the third floor, which could not be reached except by passing through a ward with small-pox patients; the insane ward adjoins that of those unfortunates who have undergone the most cruel operations, and dare not hope for rest in the neighborhood of the mad, whose phrensied cries are heard night and day; often in the same ward contagious diseases are placed along with those which are non-contagious; females laboring under small-pox alongside of those attacked with simple fever. The operating ward, where trephining and amputation, &c., are done, contains, at the same time, those undergoing operations, those who have been operated upon, and those who are waiting for operation. The operations are performed in the midst of this ward; the preparations for the operation may be seen, and the cries of the operated may be heard by the patients; he who is to undergo an operation to-morrow has before him the *tableau* of his own suffering, and if he endures this test, it may be imagined how he can be moved by the shrieks of pain. These frights and excitements are undergone in the midst of the accidents of inflammation or suppuration, to the prejudice of his recovery or the risk of his life. The St. Joseph ward is devoted to *enceinte* females. Good or bad morals, healthy or diseased, all are brought together. Three or four in this condition are placed in the same bed, exposed to sleeplessness, to contagion from a diseased bed-fellow, and in danger of injuring their infants. Females in labor are also placed four or five in the same bed at different stages of labor. One's *gorge* rises at the very idea of such a situation, where they infect each other mutually. The greatest portion die, or go out in a depressed condition. A thousand special and accidental causes are added each day to the general and constant causes of corruption of the air, and force the conclusion that Hôtel Dieu is the most unhealthy and the most inconvenient of all the hospitals, and that two out of every nine patients die within its walls."

Such was the *Hôtel Dieu* of Paris before the revolution of '89. Let us see by what stages of successive ameliorations it has reached its present condition. The first changes were made in 1790. In that year the slaughter-house, the melting of suet and the moulding of candles, established previously in the hospital, were removed. Some

of the beds were divided by a partition. But during the revolution, and particularly since 1801, the period when the administration of hospitals was placed under the direction of the General Council, the most important changes have been progressively effected. The insane of both sexes were sent to Charenton, la Salpêtrière, and afterwards to Bicêtre. Special hospitals were established for pregnant women, sick children, and venereal patients.

A central bureau was created for the apportionment of the sick. The beautiful Hôpital Saint-Louis was set apart for the treatment of cutaneous diseases. The Hôpital Necker, and those of Cochin and Beaujon, were created. A new assignment was made to La Pitié, and, in later times, the venereal hospital was divided, and the Hôpital des Cliniques established. The ordinary population of Hôtel Dieu was reduced to 1,800, then to 1,200, and afterwards to 800, which is now its published number.

The most important improvements were the following: the definitive suppression of double beds, and the introduction of iron bedsteads with cotton curtains; the classification of patients according to sex, and the creation of medical and surgical wards; the demolition of certain portions of the buildings, and the reconstruction of the whole; the formation of special dormitories for the male and female attendants in the wards; the successive perfecting of the system of warming; the establishment of a double vestibule for each of the four stories of the southern building.

The expenses of Hôtel Dieu were, in 1837, 575,824 francs; the average expense of a patient, $1\frac{74}{100}$ francs a day, and the cost of each patient $31\frac{47}{100}$ francs. The average expense a day has decreased progressively: in 1820 it was $2\frac{30}{100}$; in 1825, $1\frac{86}{100}$; in 1830, $1\frac{79}{100}$; in 1832, $1\frac{74}{100}$; and it is now $1\frac{87}{100}$. This is due to the improvement of the *régime*. The expense of each patient has also diminished since the period of sojourn has diminished.

The researches made by Tenon show that, before the revolution, the mortality was 1 for every $4\frac{1}{2}$, but in fact the mortality was much greater. Formerly many persons were admitted who were only slightly sick, and others who were not sick at all; the calculation includes all those admitted, although those really sick should have only entered into the calculation. Besides, the deranged and pregnant females were also admitted, and their mortality could not be compared with that of the other patients. The following is the mortality from 1816 to 1856:

1816, 1 in	4.47	1829, 1 in	6.33
1817, "	4.42	1830, "	6.87
1818, "	5.35	1831, "	8.53
1819, "	6.07	1832, "	5.12
1820, "	6.50	1833, "	9.96
1821, "	7.10	1834, "	11.06
1822, "	6.82	1835, "	10.14
1823, "	6.54	1836, "	9.35
1824, "	7.11	1837, "	8.93
1825, "	6.95	1838, "	9.12
1826, "	6.81	1840, "	9.13
1827, "	6.88	1856, "	10.17
1828, "	6.89		

In the *ensemble* of hygienic conditions there is no hospital in Paris which is superior to Hôtel Dieu.

HÔPITAL DE LA PITIÉ.—This was first a place of refuge for mendicants, established in 1612 by Mary de Médicis. The repairs made at Hôtel Dieu in 1809 obliged the General Council to open a supplementary asylum to the sick. The location of the Orphan-House of the Faubourg St. Victor was changed to the south of the Jardin des Plantes. This house, known under the name of *Nôtre-Dame de Pitié*, was first intended to be a simple appendage to Hôtel Dieu; soon it was made a separate hospital. There were in La Pitié, in 1856, 9,295 patients. The average mortality that year was 1 in 8.76, and 1 in 9.88 in the decennial period from 1845 to 1854. The number of beds was formerly 200; it is now 624. This hospital is composed of several buildings, separated by courts and wide promenades; the plans are beautiful, and most suitable for the purpose; the *ensemble* of the buildings is a long, irregular rectangle. Its principal gate fronts on the Rue Saint-Victor, and several of its wards have a view of the Jardin des Plantes.

HÔPITAL LARIBOISIÈRE.—The most modern and best arranged of the Paris hospitals; containing 625 beds. Towards the end of the reign of Louis-Philippe its buildings were begun, and finished under the Republic. It received the name of Madame de Lariboisière, to whose liberality its erection was due. Two systems of ventilation are employed in this hospital; that of aspiration proposed by M. Duvoir, and that of propulsion. The number of patients admitted during the year 1856 was 9,086, while that of deaths during the same year was 883. The average mortality during the period from 1845 to 1854 was 1 in 8.25; in 1855, 1 in 8.35; and in 1856, 1 in 10.28.

HÔPITAL DE LA CHARITÉ.—This hospital was formerly under the direction of the congregation of Saint-Jean de Dieu. Marie de

Médicis, at the commencement of the seventeenth century, brought some of the members of that congregation from Italy. She placed them first in the street now called *des Petits-Augustins*, but then *de Petite-Seine*, and a few years afterwards, in 1607, in the place which is still occupied by that establishment.

The Hôpital de la Charité is situated on a small elevation; favoring drainage of the water used in the establishment. The number of its beds in 1790 was only 208. More than one-half of the beds of the patients have been established by private charity. At the commencement of the Revolution it required 12,000 francs to establish one; each patient had his bed; demands for admission were numerous; great recommendations were required to obtain this favor; now it is different, and there is no need of any recommendation; it is only necessary that one should be sick to secure admission. In former times only 200 men were admitted; then 100 women were allowed in addition. At present the number of beds is 424. The number of patients admitted from 1804 to 1814 was 27,454; and it is now about 8,000 a year. In 1855 it was 7,878; the number of deaths in the same year was 721. The average mortality during the decennial period from 1845 to 1854 was 1 in 8.84; in 1855 1 in 8.78; and in 1856, 1 in 10.95.

HÔPITAL SAINT-ANTOINE.—This was opened at the beginning of 1796, in the old abbey of Saint-Antoine, which was founded in the thirteenth century. It was under the direction of the nuns of the order of Citeaux. It was first known as *Hospice de l'Est*. The decree of the National Convention establishing it is dated January 17, 1795. It simply declared that a new hospital should be opened in the new building of this abbey, and should contain 160 beds. At present it contains 320 beds; this number is not yet sufficient, considering the number of workmen and people in moderate circumstances who inhabit that faubourg. It is indispensable in a quarter so populated with poor laboring men. The hospital, however, is one of the most beautiful, healthy, and best arranged for every service.

The number of patients received from 1804 to 1814 was 21,860; during 1856 it was 5,753; and the number of deaths during the same year was 503. The average mortality during the decennial period from 1845 to 1854 was 1 in 9.99; in 1855, 1 in 8.18; and in 1856, 1 in 11.35.

HÔPITAL NECKER.—The house used by this hospital was formerly occupied by the Benedictines. The king decreed in 1779 an annual sum of 42,000 francs to establish a hospital with 120 beds, and Mad.

Necker was charged with its superintendence and direction. She hired, for 3,600 francs a year, the convent at the extremity of the Rue de Sèvres. The house at first was called the hospice of the parishes of Saint-Sulpice and Gros-Caillou. During the Revolution it was called *l'Hospice de l'Ouest*. It now bears the name of the charitable female whose cares and benefactions made her its true founder.

Large additions have been made to the Hôpital Necker, and successively four blocks of buildings have been erected. These buildings contain 400 patients. From 1804 to 1814, 11,074 patients were admitted. More than 7,000 patients have been received in a year. During 1856 the number admitted was 7,563, and the mortality 790. The average mortality for the decennial period from 1845 to 1854 was 1 in 8.30; exactly the same average for 1855; and in 1856 it was not more than 1 in 9.55.

HÔPITAL COCHIN.—This hospital, situated at the southern extremity of Paris, bears the name of its founder, M. Cochin, who was for a long time *curé* of *Saint-Jacques du Haut-Pas*; he was satisfied with naming it from the quarter where it was located. The council of the hospitals believed it proper to give it the name of its founder, and there was ordered to be placed in the principal hall the marble bust of this venerable friend of the poor. The hospital was only intended at first for 38 patients; it now contains 125 beds. Funds have been lately voted for its enlargement, but the want of solidity in the soil has not allowed the construction of buildings.

The number of entries from 1804 to 1814 was 11,636. Nearly 2,000 are now admitted per year; during 1856 it was 1,964, and the number of deaths 161. The average mortality has been, during the decennial period from 1845 to 1854, 1 in 10.20; in 1855, 1 in 9.62; and in 1856, 1 in 12.21.

HÔPITAL BEAUJON.—This hospital was founded by M. Beaujon, in 1780, some years before the Revolution; it was intended to receive 24 orphans—12 boys and 12 girls—from the parish of Roule. Six places have been assigned for children in particular, but the intention of the founder was soon disrespected, and it was converted into a hospital for the sick. The Hôpital Beaujon was constituted by a decree of the National Assembly, January 17, 1795. The number of beds has been successively raised from 140, to 220 and 300, and through the elegant buildings afterwards erected, the number has been raised to 500. This limit is wise, since this quarter and the neighboring villages have increased so rapidly, that but a small portion of the patients can be received which are presented at the consulting-

rooms of this hospital. The arrangement of the new wards of this hospital is a model worthy of imitation. Its large halls are ventilated by two systems: that of M. René Duvoir, the method of aspiration, and that of Dr. Van Hecke, which combines aspiration and propulsion.

From 1804 to 1814 it had admitted 13,739 patients. The number admitted during 1856 was 6,118, and the number of deaths 663. The average mortality in the decennial period from 1845 to 1854 was 1 in 8.10; during 1855, 1 in 7.27; and in 1856, 1 in 9.37.

L. H. S.

Zoster. By Dr. J. BIERBAUM. (Translated and condensed by C. A. HARTMANN, M.D., Cleveland, Ohio.)

Two forms can be distinguished: one with fever, the other without. The latter is the more frequent. The fever, when present, is of an erethetic character; it may disappear with the outbreak of the eruption, or continue afterwards. Usually, the eruption is preceded for two or three days by lassitude, headache, diminished appetite, chilly sensations, and slight vascular excitement. Nausea, furred tongue, a bitter taste, and yellow urine, have also been observed among the precursory symptoms. The spots which are about to be covered by the eruption appear hot, burning, and prickling. They become covered with vesicles sometimes within twenty-four hours. These vesicles contain a fluid at first transparent, but growing turbid after some time, and are surrounded by a dark-red halo. In severe cases, the whole surface of the affected part is apt to assume the same color. Appearance, efflorescence, decline, and incrustation, constitute the different stages of the eruption. It occurs on the abdomen, chest, neck and arms; in by far the most cases on one side only, although it has been found encircling the body. In seven out of ten cases the right side of the body was affected, and in six of the seven, the chest. A certain resemblance to other febrile eruptions cannot be denied; zoster, however, differs from them in not being contagious; and from erysipelas, with which it has been often confounded, in not being connected with bilious symptoms, and not apt to return. It must be considered as a herpetic disease, constituting a separate species.

The diagnosis rests on the vesical form of the eruption; the regularity of its development ending with incrustation, and the limitation to a certain number (eight, fourteen or twenty-two,) of days. With rare exceptions, the eruption is always arranged in a semicircle, not

exceeding the central line of the body. The face and the lower extremities are never affected by it.

Among the predisposing causes, age seems to deserve a place. According to Schoenlein and Bateman, young persons between the years of twelve and twenty-four are commonly the sufferers; but the author has seen the disease also in children of six, eight, and nine years, as well as in persons between fifty and seventy years. Neither sex nor constitution manifests a demonstrable influence. Summer and fall are said to be the seasons of zoster. Of nine observed cases, six occurred during March, September, October and December; three only in May and July. The pectoral form is stated to be more frequent in winter; the abdominal variety in summer. This seems to be correct. There is no evidence that hygienic neglect or atmospheric changes have any connection with the disease, nor is anything known about its epidemic appearance. Cold, anger, functional disturbance of the skin, and other presumed occasional causes, seem to be accidental. In most cases the immediate cause cannot be ascertained.

The disease always ends in recovery. Where death has been reported, the diagnosis was erroneous. The most troublesome symptom is the burning pain which deprives the patient of rest and sleep. Although usually enabled to be around, some patients are confined to the bed for three and more weeks. If ulceration and violent pains occur in aged individuals, a considerable prostration is inevitable.

The fact that zoster, like the eruptive fevers, runs a certain course, does not exclude treatment entirely. Internal remedies may not be necessary in simple eruption without fever; they cannot be dispensed with in the febrile form. The fever itself gives no therapeutical indication. Venesection is forbidden by the character of the disease, and the old treatment with cathartics and diaphoretics cannot be approved. Where the bowels do not move sufficiently, they may be assisted by such agents as the phosphate of soda, Rochelle salt, or lenitive electuary. Spontaneous perspiration ought to be sustained. Bilious symptoms require a saturated solution of carbonate of potassa, or acetate, or carbonate of soda. Neuralgic pains of the head and arms yield to Dover's powder. The vital powers are to be supported in aged patients, when prostration threatens from long loss of appetite, violent pains, or ulceration. Schoenlein well remarks, that sharp pains in the chest, with oppression and palpitation of the heart, furnish no indication for blistering. In violent colic and vomiting the same precaution is useful. Some anodyne fomentation, cataplasm, or embrocation may be proper. The oil of poppy brushed over the erup-

tion is a good topical application. Incision of the vesicles, as well as the application of irritating ointments, only promote ulceration. Where this occurs from external irritation, the zinc-ointment is serviceable.—*Journal fuer Kinderkrankheiten*.

A Case of Epilepsy, Trephined. By H. G. LEIGH, M.D., Petersburg, Va.

William Bird, free negro, black, aged forty years, married, received a blow from a brick about two years since, which caused a slight depression in the anterior inferior angle of the parietal bone, on the left side. He states that he was insensible for some time after receiving the blow. The wound healed up without much trouble. He had been healthy up to the date of the blow. Since then he has been subject to epileptic seizures, returning every few weeks.

He has been treated by various physicians, in various ways—bled, cupped, leeches, and salivated; from all of which he derived no benefit.

He came to the Petersburg Infirmary on February 16th, having had a recurrence of the epileptic fits every two weeks for the last two months.

There was an evident depression in the anterior inferior angle of the parietal bone of the left side. He was put upon low diet, and ordered a mercurial purge every third night. The fits returned regularly, every two weeks.

March 10th, he was operated on by Dr. J. J. Thweatt, assisted by Drs. Dunn and Leigh, with Galt's new conical trephine. There was a good deal of hæmorrhage, requiring the ligature of two small arteries. The trephine proved to be far superior to the old one, now in general use. The membranes of the brain were not injured in the least; in fact, they cannot be hurt with this instrument. He was trephined over the anterior inferior angle of the parietal bone, immediately over the middle meningeal artery, which could be seen very plainly after the operation.

After taking out the button of bone, the wound was brought together with adhesive straps, and water dressings applied. That evening he had a slight fit, which lasted only a few minutes. The wound healed up by first intention. He has had no sign of an epileptic seizure since the evening of the operation.

We would recommend Dr. Galt's conical trephine to all operators, in place of the old instrument.

QUARTERLY REPORTS ON MEDICAL PROGRESS.

REPORT ON THE THEORY AND PRACTICE OF MEDICINE.

By MARK BLUMENTHAL, M.D.

I. ALIMENTARY CANAL—DYSENTERY.

- (a.) *On the Employment of Perchloride of Iron in.* By Dr. AUG. BAUDON. (Bulletin Gén. de Thérapeutique, Nov. 30th, 1861.)
- (b.) *Recent Observations on the Employment of Nitrate of Silver in.* By Dr. L. GROS. (Ibid.)
- (c.) *Epidemics of—in Paris and the Provinces during the Months of August and September.* By Dr. EMPIS. (Gaz. des Hôpitaux, Nov. 31st, 1861.)

II. LUNGS—TUBERCULAR PHTHISIS.

On the Diseases Produced in Watchmakers by Copper and the Absorption of Cuprous Molecules. (Rev. de Thér. Médico-Chirurgicale, December, 1861.)

III. KIDNEYS—DIABETES.

A New Clinical Method of Estimating the Quantity of Sugar in Diabetic Urine. By Dr. WM. ROBERTS. (Edinburgh Medical Journal.)

IV. FEVER—TYPHOID.

- (a.) *Memoir on—read before the “Medical Society of Emulation,” of Paris.* By M. CAZALAS.
- (b.) *Paper on—read before the Egyptian Institute of Alexandria.* By Dr. B. SCHNEPP. (L'Union Méd.)
- (c.) *The Thermometer as a Means of Diagnosis in.* By Dr. WUNDERLICH. (Medical Times and Gazette.)

I. Alimentary Canal—Dysentery.

Dysentery, always a grave disease, at certain seasons and during certain epidemics, becomes frequently fatal. Notwithstanding that its pathology is well understood, and its lesions characteristic, its treatment is by no means so well known, nor as rationally based in the minds of the profession at large, as could be wished. The natural result is, that we constantly meet with new remedies suggested, or old ones revived. There is, it is true, ample cause for further search of curative means, for it is not to be denied that many cases, particularly in children, seem perfectly uncontrollable from the beginning. In this view, we subjoin a few practical facts, the results of experience, as brought to us at recent dates.

(a.) Dr. Aug. Baudon states that he has treated a dozen very severe cases of dysentery, characterized by tenesmus, prolapsus ani, bloody stools, 20, 30 to 40 a day, and extreme prostration, by the exhibition of the solution of perchloride of iron, in doses of from 12 to 30 drops in twenty-four hours, in a vehicle of water and syrup; at the

same time administering two or three warm-water enemata, daily, containing from 12 to 25 drops of the solution, with the addition of laudanum when much pain exists. Five of the cases were children from one to ten years of age, four women, and three men. All of them recovered. His patients were under treatment from four to eight days. These results are exceedingly satisfactory, and if they shall be substantiated by further experience, well worthy of adoption and imitation.

(b.) In the same journal, M. Gros relates eight cases of dysentery, in which he employed the nitrate of silver, chiefly in injections. After trying narcotics and emollients from three to five days, the patients gradually growing worse, he used the solution of nitrate of silver, in weak doses, with the best effects. In order to test the matter conclusively, after having controlled the bloody discharges, he ceased the use of the solution, and reverted to narcotics, &c.; but the serious symptoms again returning, the doctor recurred to his silver, and at once controlled the affection.

The immediate effect of the nitrate was to stop the bloody discharges and tenesmus. The pain also was relieved by its injection, whilst simple warm-water enemata always increased it. Whenever the injections did not at once produce the desired result, the nitrate was administered by mouth, in the form of pills. Dr. Gros ascribes the advantages of pill and enema respectively to the location of the dysenteric lesions. Thus, where the pain and tenderness, &c., were about the sigmoid flexure and rectum, the injections were most efficacious. When, on the other hand, the symptoms indicated that the lesions were situated higher up in the transverse or ascending colon, even as high as the ileo-cæcal valve, the administration of the pill, or by way of the stomach, was most satisfactory. When the entire colon and rectum appeared to be involved, the combination of the two means proved desirable.

The treatment of dysentery by nitrate of silver, by no means new, thus receives corroborative support from French physicians, after having been long since recommended and practiced by English and American practitioners. Dr. Gros very judiciously adds, that this treatment is by no means to exclude other means; and, above all, quiet in bed, and great care in the regulation of diet, are essential concomitants.

(c.) This method of treatment has received still further support in the experience of Dr. Empis, physician to several Parisian hospitals, who reports the results thereof, as verified both in public and private

practice during the prevalence in that city and suburbs of diarrhœa and dysentery during the months of August and September last. "During the first weeks of August," says Dr. Empis, "the epidemic (being then at its beginning) consisted chiefly of catarrhal diarrhœas, accompanied by a great degree of weakness; later, towards the end of August, and all the month of September, the epidemic had changed its character; it was no longer diarrhœa, but veritable dysentery; sometimes mild, but most frequently very grave. The degree of debility which prostrated the patients from the beginning was remarkable, accompanied by vertigo and profuse sweating. This debility could not be explained by the number of diarrhœic discharges, because it bore no relation or proportion to them; some patients, in whom the discharges were very few and slight, were so reduced as to remain in this depressed condition for more than a week after the cessation of the evacuations."

In further describing this epidemic, the doctor says: "The tenesmus and burning sensation about the anus were the only painful symptoms. There was no colic either before or after the evacuations. The abdomen was soft, not tympanitic, nor did palpation produce pain. This dysentery was essentially without fever—apyretic and adynamic; the patients were depressed, prostrated; there was great tendency to chilliness in the serious form; the skin became wrinkly and slightly cyanotic; the physiognomy was much changed, the eyes becoming horny, and losing their expression. The pulse was generally small, compressible, and in severe cases, unequal; the tongue simply whitish; the progress of the disease very rapid. At the height of the epidemic, death occurred from the fourth to the seventh or eighth day. In those which recovered, the disease had a duration of six or eight days in the lighter, but rose to fifteen or twenty days and over in graver cases."

Post-mortem examination revealed in all the cases the dysenteric lesions, occupying solely the large intestine, the disease having always commenced in its lower portion, and extended upward; so that while well-defined inflammation of the follicles and mucous membrane, and even ulcerations, were found below, a sort of follicular eruption simply occupied the upper, transverse, and ascending colon and ileo-cœcal valve, most marked upon the projecting folds of the mucous membrane."

It was in this epidemic that, after having employed opiates, emollients, astringents, bismuth, vesicatories, &c., Dr. Empis, finding two of his patients sinking into an adynamic condition presaging early death, resorted to the use of nitrate of silver pills, (10 ctgr. in each

pill,) giving one every four hours, with the most satisfactory results; and being thus encouraged, he at once prescribed it in two other cases, with the same effect; all these four patients being quickly placed out of danger. Having thus tested the efficacy of the remedy in the most advanced stages of dysentery, Dr. E. now employed it in others as soon as bloody evacuations appeared, and thus far has had reason to be exceedingly pleased with the results. In fine, M. Empis believes, 1. The efficacy of the remedy to be undeniable. 2. That several of his patients owe their lives to it; and 3. That it is the best remedy he employed during the epidemic.

II. *Lungs—Tubercular Phthisis—Prophylaxis.*

Besançon, in France, is a great watch manufacturing town. There are upward of three hundred workshops, with over three thousand persons employed therein engaged in the making of watches. The polisher, the replacer, the finisher, the engraver, all continually manipulate metal, either gold or copper, of which particles are absorbed into the system either by the lungs or through the skin. This absorbed copper causes certain gastric symptoms, (to which Dr. Perron called the attention of the Medical Society of Besançon.) They constitute complete poisoning of the system by copper, and the continued exposure of the workmen injuriously affects their health, and strongly predisposes them to tubercular phthisis. Hence all mechanical manipulation of copper should be interdicted to those persons having a tendency—either hereditary or accidental—to such disease. “They should have much outdoor exercise, and employ frequent evacuants and sudorifics. To guard against the effects of working in these shops, they should be daily well ventilated, while the employees should strictly observe cleanliness, bathe frequently, use succulent aliments and tonic drinks, and wear moustaches.”

The aggregation of many individuals in a confined space is, under all circumstances, prejudicial to health; if now we add the inhalation of metallic particles, the condition of affairs is certainly not improved thereby, particularly where the organs of respiration are subject to suspicion. Whether, however, the absorption of the cuprous particles more than those of any other metal is injurious, and tends to excite phthisis pulmonalis, is open to question. All influences that destroy the powers of digestion, or depress the general system for a length of time, must be considered as tending to develop lung disease, particularly where these organs have some hereditary taint.

III. *Kidneys—Diabetes—Test for.*

Everything that tends to benefit the patient, or render less difficult the obstacles the physician has to overcome, is of importance to the practitioner; and when at one and the same time we can gain positive information regarding the nature of a disease, and also an exact estimate of its intensity—with the means of measuring its daily increase or diminution—we should certainly avail ourselves with avidity of such desirable assistance, and acknowledge with gratitude the favor conferred. Dr. Wm. Roberts, Physician to the Manchester Royal Infirmary, has placed us under obligations by the publication in the *Edinburgh Medical Journal*, for October, of "A New Clinical Method of Estimating the Quantity of Sugar in Diabetic Urine." It is true we have had means of discovering the presence, and estimating the quantity, of sugar in urine long since, but none so simple, so satisfactory, so conclusive, and so easily within reach of every one. It is this last quality of the test that must peculiarly recommend it to the general practitioner. "The only instrument required is the urinometer (with the use of which every practitioner is familiar) and two phials, one of twelve ounces and the other of four. The principle of the test is most simple. *It is to take the specific gravity of the urine before and after fermentation, and from the loss of density occasioned by the conversion of sugar into carbonic acid and alcohol to calculate the amount of sugar destroyed.*"

"The analysis of diabetic urine by this method is thus performed: About four ounces of the urine are poured into a twelve-ounce phial, and a lump of German yeast, of the size of a small walnut or so, is added. The phial is then loosely corked, or covered with a slip of glass, and placed on the mantle-piece or other warm place to ferment. Three or four ounces more of the same urine are likewise put up in a companion phial, tightly corked, without any yeast, and placed beside the fermenting phial.

"Fermentation soon begins, and proceeds with such rapidity, that in twenty-four hours not only is the process completed, but the scum and froth are dissipated from the surface, and the urine, though still cloudy, is fit for the second stage of the process—namely, taking the densities. It is advisable, however, to remove the phials from the mantle-piece a couple of hours beforehand, so that their contents may cool down to the general temperature of the room.

"The specific gravity of the two products is then separately observed in the usual way, by pouring the urine into a cylindrical glass vessel, and dropping in the urinometer. The fermented urine

will be found to have suffered a very great diminution of density, ranging from 30 to 40 degrees, more or less, according to the amount of sugar destroyed. This diminution of density holds such proportion to the sugar originally present in the urine, that for each grain of sugar per fluid ounce there is a fall of one degree of density; or in other words, for every degree of density lost, you may count one grain per ounce of sugar in the urine. For example:

Density of a diabetic urine before fermentation, . .	1040 deg.
Density after fermentation, ...	1002 deg.

Density lost by fermentation, ...	38 deg.
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These 38 degrees of density lost, indicate that the urine contained exactly 38 grs. of sugar per fluid ounce, or 740 grs. per imperial pint. This result, too, is identically the same, as can be arrived at by the best other calculations; or if there be any discrepancy, it is so slight as not to affect the result, particularly if the density be taken at 60° Fahrenheit."

The method thus presented to the profession is exceedingly well adapted for general use. The entire examination need not take more than ten minutes. The materials essential thereto are simple and within easy reach, the principle easily understood, and the calculation almost self-made.

A lump of solid German yeast is recommended by the author as preferable, because it yields scarcely any soluble matter to water or urine, and, consequently, does not interfere with its density. The quantity used should be in large excess—to quicken fermentation, as a little more or less does not affect the result; the phial used for fermentation requires to be large, to give room for the fermenting process. The ordinary urinometer answers very well—unless more exact results are desirable—when it should have a long scale, upon which half and quarter degrees are marked. The method thus detailed the author calls the "Clinical Method," and thus sums up the successive steps of the analysis:

"1. Four ounces of urine are placed in a 12-ounce phial, with a lump of German yeast in it, about the size of a walnut.

"2. This is loosely corked, or covered with a slip of glass, and placed in a warm place to ferment.

"3. A companion phial filled with the same fluid—say a 3-oz. phial—is tightly corked, and placed beside the fermenting bottle.

"4. In about 22 hours, when fermentation has ceased, the two bottles are removed, and placed in some cooler part of the room.

"5. Two hours after—24 hours after the commencement of the experiment—the contents of the phial are separately poured into cylindrical glasses, and the density of each observed.

"6. The difference between the two densities is thus ascertained, and every degree of 'density lost' indicates one grain, per fluid ounce, of sugar in the urine."

IV. *Fever—Typhoid.*

(a.) The question of the identity or non-identity of typhus and typhoid fevers, though pretty conclusively settled in the minds of most English and American physicians, seems still to puzzle some of our French confrères. M. Cazalas recently read an interesting Memoir before the "Medical Society of Emulation," in which, after premising that he had always believed in the non-identity doctrine, and referring to his extensive fields of observation while in the French armies at home, as well as in the Crimea, Africa, and Italy—he expresses his own conviction, supported by the opinions of his colleagues, who like him had had ample opportunities for observation, that typhus and typhoid fever are "identical in their nature, constituting but one nosological species. Species which changed by the peculiar conditions in the midst of which they are developed, may exhibit an infinite variety, in regard to their symptoms and general anatomy, but in which the forms and complications never lose completely their essential character constituting the species; characters which are everywhere recognizable in the midst of all other diseases, be they simple or complicated, trifling or grave, spontaneous or communicated, sporadic or epidemic, and which are named—typhoid, when simple, regular, sporadic, and spontaneous, and when they appear disseminated, and in previously healthy persons; and typhus, when complicated, irregular, epidemic, when it spreads by manifest contagion among a crowded, cachectic population, or already sick subjects."

Dr. Cazalas bases these conclusions upon what seem to him perfectly undeniable facts: thus he was very often sorely perplexed to say, whether the patient had typhus or typhoid—often diagnosing typhus, when the post-mortem revealed the typhoid lesions—and being confident, on the other hand, of treating typhoid fever, when in the end the autopsy failed to support the theory. He says: "Now, when two diseases, equally specific and alike contagious, develop themselves under the influence of the same specific cause, and are transmitted by the same mode of contagion; when these two diseases cannot be distinguished from each other in practice, either during life

or after death; when they present the same type, the same symptoms, the same progress, the same periods, the same duration, the same forms, the same terminations, the same anatomical lesions, and which demand the same prophylactic and curative means, it is difficult, it seems to me, *to admit that they are different* in nature and species." Dr. Cazalas, in short, "believes it impossible at the bedside, and from the symptoms and progress of the case, to establish a differential diagnosis between typhus and typhoid fever," (!!!) and adduces the names of some half dozen colleagues who confess their want of success in the effort.

(b.) In this connection it may be proper to refer to a paper on Typhoid Fever, recently read before the Egyptian Institute, at Alexandria, by Dr. B. Schnepf, in which he states that typhoid fever presents itself in Egypt in a much less formidable form than in Central Europe; it also runs its course in a shorter period. M. Bruner Bey, a native author, declares that he has never met ileo-typhus in adult natives, nor in negroes; but the natives are not exempt therefrom during childhood, being particularly liable between the ages of 8 and 14 years. Its occurrence among adults is principally confined to strangers. Thus Dr. Griesinger, while treating 1,087 patients in the hospital at Cairo, met but 200 with typhoid affections, and of these but 15 had *typhoid fever*. "The *uniform* results of post-mortem examinations of those who died of the fever *were some morbid modifications of Peyer's glands*."

(c.) As a curious and ingenious means of diagnosis in typhoid fever, may be mentioned the *Thermometer*, as proposed by Professor Wunderlich. Starting with the proposition that this disease has two perfectly distinct stages, in the first of which infiltration and exudation occur, and in the second retrogressive metamorphosis, elimination of morbid matter and healing of diseased parts, he believes the thermometer will indicate not the stage alone, but the intensity of the disease, its progress and its probable result. Thus, "within the first week the thermometer is often able to render the diagnosis certain, when other symptoms cannot do so, as the temperature of the skin rises in the following characteristic manner: In the first half of the first week it augments from morning to evening 2.25 degrees Fahrenheit, (1 Réaumer;) and from evening until the following morning it falls 1° 1' Fahrenheit, ($\frac{1}{2}$ R.) In the second half of the first week the evening temperature remains 103° 3' to 104° and higher, while the morning temperature is 1° 1" lower."

"There is no typhoid fever when the temperature rises to 104°

Fahrenheit on the first or second day of the disease, &c. On the other hand, when the temperature increases every evening—though the symptoms seem light—we may safely assume the existence of typhoid fever. In the second week, whenever the temperature is below 103° in the evenings, there is no typhoid fever," &c.

But we will not follow the subject further, as we hardly think a safe diagnosis or prognosis could be based upon such a test alone. It is a refinement which will never come into general use, though it may be very useful sometimes to assist in the diagnosis. After all, patient examination and study of all the objective and subjective symptoms presented, with conservative practice, such as the thinking portion of the profession now generally follows, will guide pretty safely both in diagnosis and treatment, in this as in all other diseases.

QUARTERLY REPORT ON OBSTETRICS.

By T. GAILLARD THOMAS, M.D.

1. *Rupture of the Uterus in the Fourth Month of Utero-Gestation.* By Dr. W. B. MCKINLAY. (Medical Circular and General Medical Advertiser, Oct. 23d, 1861.)
2. *Cases Illustrative of the Independent Liability of the Fœtus to Disease.* By Dr. H. WEBER. (Ibid.)
3. *Extra-Uterine Gestation, continuing without Suspicion of Pregnancy, to the Full Term.* By Dr. GEO. CHEESMAN. (London Lancet, December, 1861.)
4. *Extra-Uterine Fœtation of Eight Years and Three Months' Standing.* By Dr. THOS. DAVIS. (Dublin Medical Press, December, 1861.)
5. *Cæsarean Operation.* By Dr. ASHTON. (Medical Circular and General Medical Advertiser, Nov. 13, 1861.)
6. *Induction of Premature Labor.* By Dr. E. A. KINLY. (Ibid.)
7. *Malignant Tumor of the Recto-Vaginal Septum—Extirpation by the Linear Ecraseur.* Reported by Dr. PARMENTIER. (L'Union Médicale, Oct. 19th, 1861.)
8. *Strangulation of the Fœtus by the Umbilical Cord.* By Dr. BARTSCHER. (Gaz. Hebdomadaire, No. 45.)

1. "The deceased, B. T., was aged about thirty-seven years, of a robust habit of body, and had always been healthy. Was a farm-servant, but had latterly come into the village for the purpose of taking care of her father, who was an infirm old man. On the day previous to her decease, she had gone by railway to a neighboring village about four miles distant, accompanied by Mrs. W., in whose house she slept. They returned on foot, and called at a farm-house, where they partook heartily of tea, at which they had cheese. During the whole

of that time the deceased was in good spirits; indeed, those who saw her state that they had never seen her more cheerful. On their return home she remained in the house for some time, and between half past eight and ten o'clock went out with a daughter of Mrs. W. and visited some friends. When they returned, she went into her father's house, prepared his supper, milked his cow, and returned to Mrs. W's at about a quarter to eleven o'clock, shortly after which time she retired to bed, not complaining, and seemingly in good health and spirits.

"Shortly after going up stairs to bed, a little girl came down and stated that the deceased was very ill, on which she was seen by Mrs. W. She stated that she was much pained in the stomach and bowels. When asked if she thought she had walked too far, she answered not; she said, however, in answer to a question put to her, that she was afraid of inflammation. At this time she was vomiting. A medical man who was in the house was asked to see her, with which he complied. He examined the vomitings, and having found some portions of the cheese of which she had partaken at tea, he said it was only a disorder of the stomach, and ordered a mustard plaster to be applied over the stomach. She applied the mustard herself, and stated that she felt relieved by it, after which she lay quiet for some time. About half past one o'clock she became worse, and the mustard was a second time applied by herself. When asked at this time if she was pregnant, she would give no answer. Between two and three o'clock a dose of castor oil was administered to her, which she seemed reluctant to take, and on being asked the reason, she said that feeling her stomach a little out of order, she had taken a tea-spoonful of sulphur in her father's house before she came in. This would be between ten and eleven o'clock. The mustard was applied a third time, but no alleviation of the symptoms took place. About four o'clock she was said to have confessed in an ambiguous manner that she was pregnant. Shortly after this she became quiet, and died about a quarter before seven o'clock.

Autopsy.—"On laying open the abdomen, the cavity was found to contain a very large quantity of serum, blood, and clots of blood, which, upon being removed, were found nearly to fill a large wash-hand basin. The stomach, which was very much contracted, was carefully secured by double ligature, and removed from the body. Upon being opened, it was found to contain a small quantity of a whitish pultaceous mass, having bits of what appeared to be cheese, and also a number of small blackish particles mixed up with it. The lining

membrane was in several places much reddened. The whole stomach and its contents were carefully placed in a clean glass jar, which was duly sealed, labeled, and preserved for further examination. On laying open the œsophagus and pharynx above the ligature which had been placed upon it, they were found to contain a small quantity of fluid, through which were floating some globules of oil; part of this was removed and carefully preserved. The liver was normal, both with regard to size and appearance. The pancreas, spleen, and kidneys were of a natural appearance. The duodenum, with its contents, were removed, for further examination. The rest of the bowels were generally pale in color, and at no part was there the slightest appearance of inflammation.

“Projecting from the pelvis there was a large tumor, covered with clotted blood. This, upon careful examination, was found to be the uterus, partially protruding through a rent in the fundus of which, there was found a foetus apparently about the fourth month of uterogestation, covered with its proper membranes. The foetus was carefully removed, without dividing anything but the membranes and the umbilical cord, when the rent was found to be entirely across the fundus, and measured transversely four and a quarter inches, and in an antero-posterior direction it measured three and a half inches. The uterus at the rent was normal in structure, and at no part was there any appearance of disease.”

2. “CASE 1.—Mrs. G., a young woman, vaccinated in early life, called me in to attend her during parturition, she being at the time in perfect health, in all respects separable from the parturient condition. She was delivered, after a common-place labor, of a full-grown live male child, covered with the eruption of variola in the fully-maturated pustular stage of the disease in its discreet form; on the second day, however, the disease became universally confluent, and the infant ultimately died with convulsive symptoms. During the first four days following its birth, the health of the mother continued to warrant the hope that she was about to escape—a hope which I based upon the fact of her previous vaccination; this, however, turned out not to be the case, as on the fifth morning papulæ became apparent, and she eventually went through, and recovered from, a pretty severe attack of the disease.

“This case, which I have had in my note-book for some months, offers no points of difference from those related by Jenner, Mead, and Mauriceau as having happened in his own person, of a nature to constitute additional evidence on the subject; still, I think it may be fairly asked, bearing in mind the long apparent precedence of the disease in

the child, whether it does not excuse the dictum of the author who affirmed that disease of the ovum is more injurious to the mother than is maternal disease to the ovum.

"CASE 2, which came under my observation very lately, is, however, much more to the purpose, and indeed is as conclusive as any single case can well be.

"A poor woman, the wife of an artisan, but living under unusually favorable conditions as to light, ventilation, and cleanliness, and from whom subsequent inquiries elicited that she had never been subject to any form of skin disease, applied to me to attend her during her confinement. The child was born with a beautifully-marked eruption of herpes zoster, extending from the central spinal line across the angle of the right scapula, and round to the anterior mesial line of the ensiform cartilage. This followed the usual course of the disease, lasting about five days, and leaving, therefore, the presumption in my mind that it must have existed for at least an equal time in utero. Subsequent examination of the mother gave no trace of a similar condition in her; neither was it possible to establish any remote connection between it and external causes, by discovering an herpetic eruption on the genitals of either of the parents. Nor was it possible to attribute the appearance to the pemphigoid eruption of the French authors, the result of the syphilitic cachexia, as the history and general appearance of parents and child were opposed to the supposition, and the form and grouping of the vesicles, the uniform width of the band of eruption, its seat, the healthy condition of all other portions of the skin, and the spontaneous decline of the disease, were sufficient evidences of its nature."

3. In this article Dr. Cheesman describes a case of tubal pregnancy in a married woman, about 40 years of age, who had before borne four children. He saw her eleven months after conception, when not the slightest suspicion of her state existed in the mind of any one, her physician regarding the case as one of abdominal dropsy. On making an autopsy, the following evidences of the nature of the pregnancy were discovered:

"When the peritoneum was cut into, a large quantity of most offensive gas escaped, so as very considerably to reduce the size of the abdomen. A distinct movable tumor could now be felt within the abdomen, which might have been taken for the gravid uterus. After a large incision was made, the body of a full-grown foetus was exposed, lying transversely under the great omentum, with its head towards the right side. By following the funis, the placenta was

found, nearly normal in appearance, manifestly involved in a dilatation of the left Fallopian tube. The uterus was found pressed down towards the right side of the pelvis. The uterus was about the size of a child's head, and its walls were thickened to the extent of two inches and a half, its substance exhibiting a fibrous character; the lining membrane presented a congested appearance. Beyond this lining membrane there was nothing in its cavity. The os uteri was dilated. The right Fallopian tube was normal in character. The body of the foetus was distended with gas, particularly the head, which, from this cause, presented a hydrocephalic appearance. A large quantity—nearly two gallons—of a dark grumous fluid, with flakes of coagulable lymph, was found in the cavity of the abdomen, and dark gangrenous patches were observed in several places on the peritoneum.”

4. The Doctor's suspicions were awakened as to the nature of the case by the following history:

“Five years previously she had been in the family-way, and about the time she expected her confinement she received a great shock, through hearing that a policeman had fallen dead near the barracks, and her husband being out at the time she supposed it to be him; that for several days following she had fainting-fits, and since then the dead child remained in her womb without causing much inconvenience.”

The following physical signs convinced him of the correctness of the view, and led him to the performance of an operation for removal of the foetus.

“On examining the abdomen, the outlines of the foetus can be easily detected about two inches below the umbilicus, the great bulk of it being towards the left side. The integuments covering it are red, and in one place the fluctuation of matter is perceptible. The patient is greatly emaciated, and has the usual symptoms of hectic fever. The case at this period was seen by Dr. Wallace, of this town, and Dr. Hozier, of Cliffoey, and an operation for the removal of the foetus was proposed, but the patient would not submit to it, so we could only recommend poulticing, and supporting the strength with wine and porter. In the course of a few days the abscess burst, giving exit to a large quantity of foetid pus, of a dark color, and after a day or two more a bone protruded and was removed, which proved to be the fibula of an apparently full-grown foetus. The strength of the patient continued to give way, and on the 14th October, when, from her weak state, I considered her case almost hopeless, ‘she consented to have the offending mass removed.’ There was then two

inches below the umbilicus the sinus through which the fibula had passed, and on a line with this, about four inches distant towards the spinous process of the left ileum, a second sinus. I had therefore merely to connect the two sinuses by a transverse incision, when a black, or rather gray-colored mass, presented itself, the smell at the time being almost insupportable. On grasping this mass, it proved to be the breech, the back being towards the parietes of the abdomen. By gentle traction the body came easily until the arms reached the opening, when it required considerable care and manipulation to get them through without separating them from the body. After succeeding in doing so, I found the head would not move, and with very little force it separated. I had now before me the headless trunk of a full-grown foetus, which, considering the fact that it was upward of eight years dead, was in a remarkable state of preservation. The woman did not appear to have suffered thus far, so I gave her a little whiskey and water, and introduced my hand into the cavity for the purpose of removing the head. This I found had broken down more than the other parts, it had therefore to be removed piecemeal, and this required the introduction of the hand either three or four times; thus I had an opportunity of feeling that the cavity in which the foetus lay was lined throughout by a strong membrane. After the removal of the foetus I endeavored to dry the cavity with cotton, but this I could not succeed in, as pressure on different parts of the abdomen caused a fresh flow of reddish purulent matter. The wound was therefore covered with cotton, and a binder passed round the abdomen."

The patient recovered.

5. *Cæsarean Operation*.—At a meeting of the Edinburgh Obstetrical Society, Professor Simpson showed the pelvis of a woman on whom the Cæsarean section had lately been performed, by Dr. Ashton, of Preston, who had been kind enough to send him the preparation, along with the following history of the case:

"I may shortly state, that when I arrived at the house where my patient resided, I found that labor had commenced between one and two o'clock in the morning, accompanied with hæmorrhage; and on examining her, I found that her underclothing was saturated with blood, and small clots of blood lay about the thighs and in the vagina. On introducing the finger, I felt what appeared to be the child's head, with the scalp tumefied in the cavity of the pelvis, and extending to a length of from two to three inches, between it and the left os pubis, a soft substance having the feel of the placenta. I

thought it to be a case of placenta prævia, and I began to introduce my hand with the intention of turning, but I could not possibly get the knuckles to pass between the ischia. I may say that I have had occasion to turn in several cases of placental presentation, and many times in mal-presentations. The partial introduction of the hand enabled me to see the true nature of the case, and that the hard substance, which felt like the child's head, was the promontory of the sacrum, and, as it afterwards proved, the last lumbar vertebra covered by the internal integument, greatly swollen from the pains, pressing the child upon it above. The part which felt like the placenta was the posterior lip of the os uteri. I feel confident that any other practitioner would have formed the same opinion at a first examination, the resemblance being so like a vertex presentation, pressing the edge of the placenta and anterior lip of the os uteri against the pubis. The introduction of part of the hand brought on *very strong* expulsive pains; and I could just perceive, with the tips of the two fingers, the membranes through the os uteri. As the flooding continued between the pains, I made a strong effort to rupture the membrane; with some difficulty I succeeded, and the flooding ceased. I sent for Dr. Halden; and I have given at length, in my account to the *Lancet*, our reasons for deciding on the operation, which was performed under chloroform, in from sixteen to seventeen hours after the commencement of labor. The os uteri was fully dilated, I believe, when I ruptured the membrane, six and a half hours before the operation was commenced, and I think it had been so for some time; but it could only be felt as a long narrow opening. Although the strongest pains I think I ever witnessed continued during that time, at intervals of from five to ten minutes, not the slightest portion of the presenting part entered the brim. I could, from my hand being smaller than Dr. Halden's, just reach with the tip of the finger, but he could not feel it. She lived about twenty-five hours after the operation, and sank from internal hæmorrhage; there being a quantity of blood, which half filled a chamber utensil, lying in the lower part of the abdomen."

6. *Induction of Premature Labor.*—Dr. E. A. Kirby read a paper before the Royal Medical and Chirurgical Society, in which he gave the history of a case in which he had twice induced premature labor on a dwarf of singularly small stature and ill-development. When first seen she was twenty-seven years of age, had been married twelve months, and completed her thirty weeks of uterine gestation. On examination, the spinal column and pelvis were found to be greatly

distorted, and premature labor determined upon, the time chosen being the thirty-second week of gestation, but was delayed for a week owing to the patient suffering from bronchitis, and was only completed about the thirty-fourth. Induction of labor was commenced on January 30th, and she was delivered on February 7th. On rupture of the membranes, the elbow was found in the vagina, and the shoulder resting on the brim of the pelvis, the child lying transversely. Version was performed, and the little patient delivered of a living child. In this case about two ounces and a quarter of ergot were employed with the most useful effect, and without occasioning the least bad symptoms to mother or child. A few months later she again became pregnant, but owing to the lateness of her application the child was lost. Her first child had by this time grown nearly as tall as herself. The author laid great stress on the superiority of this operation to craniotomy, in which one in five mothers die, while in the induction of premature labor only one in fifty dies, and half the children are saved. The success, he thought, greatly depended on keeping the membranes entire until the os uteri was fully dilated.

7. The morbid mass protruded considerably into the vagina, where it formed a very convex prominence in the vertical and transverse side; the posterior half of the circumference of the vagina was entered. The vaginal mucous membrane covered the tumor again, adhering to it; it was also perforated in a point where there was an ulceration as large as a fifty-cent piece.

As the constitution of the patient was excellent, the tumor was far enough from the peritoneal prolongation to make the removal of it possible; and, moreover, the pains were becoming greater, and considering that the development of the disease threatened the patient with an anal obstruction, with retention of its contents, M. Verneuil proposed an operation, which was accepted, and performed in the following manner:

The patient, being under the influence of chloroform, was placed on the left side, on the edge of the bed, in the attitude customary for fistula in ano. A univalve speculum was introduced into the rectum and intrusted to an assistant; then, after having ascertained the superior limits of the tumor with the left forefinger introduced into the vagina, the operator conducted with the finger a large bent trochar, with which he penetrated the recto-vaginal partition, at one centimeter above the tumor; and as it extended more to the left than the right, he made the puncture to the right, to make immediately a vertical section corresponding with the right side of the tumor.

After withdrawing the trochar, the chain of the ecraseur was carried across the siphon; then, after having superficially cut the skin from the right side of the anus to the reunion of the third of the posterior with two-thirds of the anterior of the large lip, M. Verneuil made a vertical loop with the chain of the ecraseur, and on compressing four notches every minute, the first section was done in sixteen minutes; the wound remained all the time bloodless.

The tumor was drawn down by three hooks, then confined by the chain of a bent crusher, and, after having cut the skin, the section was commenced. At the end of seventeen or eighteen minutes the morbid production was completely detached: it was an *epithelioma*.

In carrying back the finger to the most distant part of the vast excavation which resulted from this operation, M. Verneuil discovered on the sides of the rectum two indurated points, which appeared suspicious. These two tumors were drawn out with a double hook; a waxed thread served to form an artificial pedicle, on which the chain of the ecraseur was thrown; at the end of three or four minutes one of the tumors was taken away, but the other was extirpated with the bistoury, because the hook was contained in the loop, and it was impossible to detach the instrument. This abstraction produced a flow of blood more abundant than all the preceding operation, for three small arteries furnished the blood. A ligature thrown immediately on the largest of the three vessels, and the compression exerted with the finger on the two others, soon caused the hæmorrhage to cease. The termination of the case was most favorable.

8. Madame G. had been safely delivered of four children, who all presented a tight rolling of the umbilical cord around the neck. The cord was, besides, 22 inches long.

The first period of her fifth pregnancy passed without accident. At the end of the seventh month, Madame G. felt a violent pain, transient, however, in the right lumbar region. At the same time, the fœtus moved with a singular degree of energy. The pain ceased in a few days, but the motion of the child ceased at the same time.

During ten or twelve days, Madame G. experienced an inconvenient weight in the lower part of abdomen, great lassitude, nausea, and repeated chills. These symptoms continued to increase for several weeks, even to the end of her pregnancy.

The labor was tedious. The waters were very abundant, and emitted a fœtid odor. The child was dead, softened, and deprived almost entirely of its epidermis. The head was exceedingly large.

The umbilical cord was 25 inches long; it contained very little of

Wharton's gelatine, and presented in several parts a gangrenous appearance. After having twice gone round the neck, it formed several very tight knots. The compression of the neck had been so violent that the soft parts were found tightly glued against the vertebral column. The putrefaction of the child was too much advanced for an autopsy to give any farther interesting results.

We must remark, that the painful sensations were suddenly experienced by the mother at the moment, undoubtedly, when the child, tied by the neck, performed violent movements, which were communicated much more easily to the womb, since the twisted cord had become too short. This circumstance, joined to the sudden cessation of all motion, may assist in the diagnosis, although uselessly, it is true, for the mother and child.

Report of a Committee of the Associate Medical Members of the Sanitary Commission on the Subject of Venereal Diseases, with special Reference to Practice in the Army and Navy.

It is in the highest degree gratifying to be able to assert, upon the authority of the reports of the surgeons of the United States Army now in the field, that in modern times there has never been collected so large a body of men, among whom venereal diseases have prevailed to so small an extent. Since, however, this class of diseases is still a fruitful source of the disqualification of men for active service, the following attempt has been made, at the request of the Sanitary Commission, to embody, in as brief a space as possible, the teachings of modern science upon this subject, with special reference to the wants of army surgeons.

SECTION I. *Prevention of Venereal Diseases.*—The following regulations, enforced in the Belgian Army, have been found by experience to render venereal diseases “by far less frequent.” So far as practicable, they are worthy of adoption in our own army.

1. Every soldier who contracts venereal disease should be required to give the name and address of the woman who infected him; and if, upon examination, she be found diseased, her removal from the neighborhood should be enforced by the military authority.

2. Every inducement should be presented to lead men to report themselves at the earliest possible moment after infection; and delay should be visited with appropriate penalties.

3. No person with any venereal disease, however slight, should be allowed to remain in quarters, but be at once transferred to the hospital.

Three Forms of Venereal Disease.—There are three separate and distinct venereal diseases—viz., Gonorrhœa, the Simple Chancre, or Chancroid, with its attendant bubo, and Syphilis, including the initial

lesion, or true chancre, and general symptoms. The first two are local, and the last a constitutional affection.

SECTION II. *Gonorrhœa and its Complications*.—1. The idea that gonorrhœa is dependent upon the syphilitic virus, and requires the use of mercurials, is without foundation. "To compel an unfortunate patient to undergo a course of mercury for a disease which does not require it, is a proceeding which reflects dishonor and disgrace upon the character of a surgeon."—(Sir Astley Cooper on the Use of Mercury in Gonorrhœa at Guy's Hospital.)

2. The treatment adapted for most cases of gonorrhœa consists of injections of a weak solution of some astringent, as from one to three grains of the sulphate, or acetate, of zinc to the ounce of water, repeated every four to six hours. Internally, a free purge at the outset, followed by laxatives, if necessary, to insure a daily evacuation from the bowels; alkaline mixtures, as solutions of the carbonates of soda or potassa, the acetate or chlorate of potassa, liquor potassæ, etc., and copaiva or cubebs.

3. When the symptoms are decidedly inflammatory, they should first be subdued by rest, cathartics, and low diet, before resorting to injections. Injections are also contra-indicated in cases complicated with prostatitis or cystitis.

4. Copaiva and cubebs should be given in somewhat full doses from the outset of their administration, but, at the same time, care should be taken not to carry them to the degree of intolerance. Excessive action upon the bowels should be restrained by opiates or astringents, in order that their active principle may be eliminated by the kidneys and pass off in the urine. They should be suspended if they occasion uncontrollable nausea or diarrhœa, a cutaneous eruption, severe pain in the kidneys, or general debility. Useful formulæ are the following: R.—Copaivæ, Spt. ætheris nitrici, āā., ʒj.; Liqueoris potassæ, ʒij.; Spt. lavandulæ comp., ʒij.; Syrupi acaciæ, ʒvj. M. (Lafayette mixture.) *A table-spoonful three times a day.* R.—Pulveris cubebæ, ʒviiss.; Pulveris aluminis, ʒss. M. *This quantity to be taken daily in three doses.* Copaiva solidified by magnesia, (16 parts to 1 by weight,) and made into boluses, is a convenient mode of administration.

5. Medication, both external and internal, should be continued for ten days after all discharge has ceased.

6. The "abortive treatment" of gonorrhœa is adapted only to the commencement of the disease, before acute symptoms have set in. The best formula for its administration is a weak solution of nitrate of silver, (gr. j. ad aquæ ʒij.,) injected every two hours until the discharge becomes thin and watery, (which usually takes place within twenty-four hours,) and then omitted. Copaiva may be given simultaneously.

7. Chordee may be prevented by drachm doses of the tincture of camphor in water, taken at bedtime.

8. Commencing abscesses along the course of the urethra should be opened as soon as detected, even before fluctuation can be felt.

9. Acute prostatitis may be recognized by frequent and painful mic-

turition, a throbbing pain in the perineum, and more or less general febrile excitement; and the finger introduced *per anum* detects the enlarged and sensitive gland encroaching upon the rectum. Retention of urine frequently ensues, and requires the introduction of a catheter. When the instrument reaches the prostatic portion of the urethra, it excites great pain, and meets with an obstruction, due to the swollen gland, which is readily overcome by gentle and continued pressure, the handle of the catheter at the same time being depressed. This affection may terminate in resolution or in suppuration. The latter is announced by repeated chills; and, if the abscess points towards the rectum, fluctuation may be detected by the finger introduced *per anum*; more frequently, however, the matter tends to escape by the urethra.

10. Acute prostatitis is to be treated at its commencement by absolute rest, cups followed by poultices to the perineum, warm baths, and laxatives or enemata. The bladder should be evacuated, when necessary, with the catheter. If suppuration ensues, the abscess should be opened at an early period in whichever direction it tends to point, either with a knife through the rectum, or with the point of a catheter through the urethra.

11. Gonorrhœal cystitis is commonly limited to the neck of the bladder. Its symptoms are an urgent and frequent desire to empty the bladder; sharp pain attending the flow of the last drops of urine; the admixture of pus or blood with this fluid; tenderness of the hypogastric region; pain radiating to the groins, perineum, anus, and along the course of the urethra. There is usually less febrile excitement than in acute prostatitis.

12. Gonorrhœal cystitis is to be treated by rest, warm baths, cups, and poultices to the hypogastrium, and, internally, by saline laxatives, the carbonates of soda and potassa, the acetate or chlorate of potassa, liquor potassæ, mucilage, flaxseed tea, and copaiva.

13. Gonorrhœal epididymitis (swelled testicle) is best treated by the horizontal posture; support of the scrotal organs; an emetico-cathartic, as a solution of Epsom salts and tartarized antimony, given in sufficient doses to act freely upon the bowels and maintain slight nausea; the application of leeches or cups just below the external abdominal ring, or bleeding from the scrotal veins, (the patient in a standing posture, and the scrotum compressed at its neck either with the hand or a fillet, and bathed with hot water until its veins are well distended;) and hot poultices, either of flaxseed or tobacco-leaves, to the affected part. Evacuate any collection of fluid in the tunica vaginalis; and, even in the absence of any marked degree of hydrocele, Velpeau's treatment by means of multiple punctures with a lancet is worthy of a trial. When the acute symptoms have subsided, employ a more tonic regimen, and strap the affected testicle. Mild urethral injections are not contra-indicated by the occurrence of swelled testicle.

14. Gonorrhœal ophthalmia requires the strictest attention to cleanliness, the frequent use of an astringent collyrium, freedom of the bowels, and, in most cases, tonics or stimulants. The eyes should be bathed every fifteen minutes with a solution of a drachm of alum to a pint

of tepid water, or a decoction of poppy-heads. The surgeon at his daily visit, after thoroughly cleansing the mucous membrane of its purulent secretion and the adherent masses of coagulum, should snip the chemosed portions of the ocular conjunctiva with scissors, and, after the bleeding has ceased, pencil the whole affected surface either with the solid crayon of nitrate of silver, or with a strong solution of the same salt, (ʒj.—3j. ad aquæ ʒj.,) washing off the residue with tepid water as soon as the surface has become whitened. In addition, a solution of five grains of nitrate of silver to the ounce of water may be dropped in the eye three or four times a day by the attendant. An active purge at the outset of treatment is desirable, and a daily evacuation of the bowels should be secured.

The great danger to vision is from ulceration and slough of the cornea, a tissue of low vitality, and a disastrous termination of the disease is favored by a low condition of the general system; hence all depressing agents, as venesection, mercurials, tartarized antimony, abstinence from food, etc., are to be avoided, and a nourishing diet, porter, ale, quinine, and other tonics, to be enjoined. If ulceration of the cornea occurs, its progress may perhaps be arrested by lightly touching the surface with a pointed crayon of nitrate of silver; and the pupil should be kept constantly dilated with atropine or belladonna. Poultices of every kind are to be strictly prohibited, and the eye left uncovered. The discharge is highly contagious, and the utmost caution should be used to prevent its coming in contact with a sound eye.

SECTION III. *The Simple Chancre and its attendant Bubo.*—1. The simple chancre, for many years confounded with true syphilis, is now known to be an entirely distinct affection, local in its character, and not requiring the use of mercury in its treatment. We are indebted for the demonstration of this fact to Bassereau, who, by an extensive comparison of individuals bearing venereal ulcers with the persons who infected them, has shown that when the disease remains local in the former, it was likewise so in the latter; and, on the other hand, that if it affects the general system in the one, it has done the same in the other; and this result has been confirmed by Ricord, Fournier, Clerc, Caby, Dron, Rollet, and Diday, of France, by Mr. Henry Thompson, Mr. Henry Lee, and Victor de Meric, of London, and numerous other observers. Independently of clinical experience, therefore, the distinct nature of the simple chancre and of true syphilis rests upon the same proof that is relied upon by naturalists in the determination of species in the animal and vegetable kingdoms, viz.: upon the immutability of their characteristic features in successive generations. But, above all, the recognition of this truth is sustained by clinical experience, which shows that a wide disparity exists between one class of cases in which, even without the administration of mercury, the disease disappears forever with the healing of the ulcer, and another class in which, without mercurials, general symptoms are sure to make their appearance, and, under the best directed treatment, relapses may occur at any period of the remaining life of the individual. Moreover, the explanation formerly given of this disparity, that it was due to a difference of idiosyncrasies, is found not to bear the test of examination; and we

are forced to the conclusion that the term syphilis, as used until a very recent date, embraces two distinct affections. To the one which is local in its character, the name of simple, soft, or non-infecting chancre, or chancroid, is now given; the term syphilis being retained exclusively for the constitutional disease.

2. The diagnostic characters of the simple chancre and the infecting chancre (the initial lesion of true syphilis) are the following:

SIMPLE CHANCRE.

Origin.—Always derived from a simple chancre, or virulent bubo. Its first appearance generally within a week after contagion.

Anatomical Characters.—Generally multiple, either from the first or by successive inoculation.

An excavated ulcer, perforating the whole thickness of the skin or mucous membrane.

Edges abrupt and well defined, as if cut with a punch, not adhering closely to subjacent tissues.

Surface flat, but uneven, "worm-eaten," wholly covered with grayish secretion.

No induration of base unless caused by caustic or other irritant, or by simple inflammation; in which case the engorgement is not circumscribed, shades off into surrounding tissues, and is of temporary duration.

Pathological Tendencies.—Secretion copious and purulent, inoculable.

Slow in healing. Often spreads and takes on phagedenic action.

May affect the same person an indefinite number of times.

Characteristic Gland Affection.—Ganglionic reaction absent in a large proportion of cases. When present, one gland acutely inflamed, and generally suppurates. Pus often inoculable, producing a soft chancre.

Prognosis.—Always a local affection, and cannot infect the system. "Specific" treatment by mercury and iodine always useless, and, in most cases, injurious.

INFECTING CHANCRE.

Origin.—Always derived from an infecting chancre or secondary lesion. Its first appearance often from one to five weeks after contagion.

Anatomical Characters.—Generally single; multiple, if at all, from the first; rarely, if ever, by successive inoculation.

Frequently a superficial erosion; not involving the whole thickness of the skin or mucous membrane, of a red color, and nearly on a level with the surrounding surface. Sometimes an ulcer, when its

Edges are sloping, hard, often elevated, and adhere closely to subjacent tissues.

Surface hollowed or scooped out, smooth, sometimes grayish at centre.

Induration firm, cartilaginous, circumscribed, movable upon tissues beneath. Sometimes resembles a layer of parchment lining the sore. Generally persistent for a long period.

Pathological Tendencies.—Secretion scanty, chiefly serous; inoculable with great difficulty, if at all, upon the patient or upon any person under the syphilitic diathesis.

Less indolent than the chancroid. Phagedena rarely supervenes, and is generally limited.

One attack affords complete or partial protection against a second.

Characteristic Gland Affection.—All the superficial inguinal ganglia, on one or both sides, enlarged and indurated; distinct from each other, freely movable; painless, and rarely suppurate. Pus never inoculable.

Prognosis.—A constitutional affection. Secondary symptoms, unless prevented or retarded by treatment, declare themselves in about six weeks from the appearance of the sore, and very rarely delay longer than three months.*

* The Pathology and Treatment of Venereal Diseases: including the Results of Recent Investigations upon the Subject. By F. J. Bumstead, M.D. 1861. P. 394.

3. When in doubt as to the nature of a venereal ulcer, treat it as a soft chancre, and keep the patient under observation until the period of incubation of general symptoms has passed. This rule is justified by the following considerations:

a. Statistics show that there are four simple to one infecting chancre; hence, in a given case, the probabilities are in favor of the sore being of the former species.

b. Even if the sore should chance to be an infecting chancre, the administration of mercury will not prevent contamination of the general system, which has already taken place. Moreover, nothing is lost by delay, since syphilis is equally amenable to treatment after the appearance of secondary as after primary symptoms.

c. We are not justified in subjecting a patient to a mercurial course unless the necessity of it is apparent.

d. An immediate resort to mercurials leaves the case in doubt, since there are no means of determining whether the subsequent immunity is due to the treatment or to the nature of the sore; and as it is not a matter of indifference whether a man has or has not in his system the germ of constitutional syphilis, no measures should be adopted which will leave the question undecided.

4. Cicatrization of a soft chancre may take place spontaneously, and is not hastened by the use of mercury. The most effective treatment consists in the destruction of the local sore by means of a powerful caustic; and the earlier this is applied the better the chances of success. For this reason, and also for the purpose of preventing the communication of the disease to others, venereal ulcers should be destroyed at the earliest possible period, even before their nature has been determined.

5. For the destruction of simple chancres, nitrate of silver, as commonly employed, is unreliable, and, in most cases, inadequate. Fuming nitric acid is the most convenient agent, and if the fall of the eschar fails to leave a healthy surface, the application should be repeated.

6. Cleanliness is of the first importance, and that dressing is commonly the best which accomplishes this in the most perfect manner. Any collection of the secretion upon the surface of the sore or upon neighboring parts, and the formation of scabs, should be avoided. Lotions are preferable to ointments, and may consist of simple water, a solution of tannic acid, (gr. iij. ad ℥j.,) a drachm of Labarraque's solution of chlorinated soda to two ounces of water, or a drachm of dilute nitric acid to eight ounces of water; and the dressing should be kept moist by being covered with oiled silk. Chancres beneath the prepuce will heal much more speedily, if the glans be uncovered and the sore dressed with wet lint covered with oiled silk and a circular bandage around the penis.

7. Phagedenic ulceration is far more likely to attack a simple than an infecting chancre, and is favored by a low state of the general system, however induced, and by a scrofulous diathesis. It is to be treated by placing the patient in the most favorable hygienic condition, by a nourishing diet, tonics, as the various preparations of iron

in large doses, opium, and the free cauterization of the ulcer with nitric acid, Vienna paste, or the actual cautery. A solution of the potassio-tartrate of iron (℥ij. ad aquæ ℥ij.) is a valuable local application. The internal use of mercury is highly injurious.

8. A simple chancre may or may not react upon the neighboring lymphatic glands. In the former case it gives rise to an inflammatory bubo, which may be either simple (containing simple pus) or virulent, (containing pus capable of inoculation.) The two varieties cannot readily be distinguished except by artificial inoculation, nor is their diagnosis of much practical importance. The former may sometimes be aborted by rest, the application of tincture of iodine or a strong solution of nitrate of silver, (℥ij. ad aquæ ℥j.) or by pressure by means of compressed sponge and a spica bandage. The latter always terminates in suppuration.

9. As soon as fluctuation can be detected, the abscess should be opened, either by several small punctures, followed by an injection of the cavity with a solution of sulphate of zinc, (gr. iij. ad aquæ ℥j.) or one part of tincture of iodine to four of water, and pressure, by means of a compress and spica bandage, be employed to insure adhesion of the walls; or the abscess should be freely opened by a *vertical* incision, (not parallel to the inguinal fold,) and the cavity, stuffed with lint, be left to heal by granulation.

10. Suppuration in a bubo affords a probability, although not an absolute certainty, that the accompanying chancre is of the simple, non-infecting species; since it is a general but not invariable rule, that syphilis does not follow an open bubo.

SECTION IV. *Syphilis*.—1. The term "syphilis" is here used to the exclusion of the local affection just referred to. The symptoms of this disease are commonly divided into primary (including the initiatory chancre and accompanying induration of the glands) and general, (including the so-called secondary and tertiary manifestations.)

2. A true chancre is the initiatory lesion of acquired syphilis, appearing at the point where the virus entered the system, and separated from the general manifestations of the disease by a period of incubation pertaining to the latter. Analogy would show that a chancre, like the vaccine vesicle, is already the result of absorption of the virus and of infection of the constitution, and not a mere local disease; hence, that its abortive treatment by destructive cauterization is incapable of averting general syphilis; hence, also, that it should receive the same general treatment as the later manifestations of the diathesis. Clinical experience confirms this view, since thorough destruction of a chancre six hours after its first appearance has failed to avert general symptoms. The period of incubation possessed by the true chancre, and the fact that it is not inoculable upon the patient, point to the same conclusion.

Experience also proves that the cicatrization of a chancre, unlike that of a chancroid, is hastened by the internal use of mercury. This sore, therefore, demands the same internal treatment as general syphilis.

3. The same form of local dressing may be used for the true chancre as for the chancroid.

4. Induration of the neighboring lymphatic glands (indurated bubo) is one of the most valuable indications of an infecting chancre, and is always present, except, perhaps, in very rare instances. This bubo is commonly free from inflammatory action, and hence may pass unnoticed by the patient. It demands no special treatment, except in those unusual cases in which inflammation and suppuration take place, when the same treatment should be adopted as that already recommended for inflammatory buboes. The persistency of the induration for a long time after the primary sore has healed is of great value in indicating the seat of the sore, and in unraveling the history of obscure cases.

5. There is always an interval between the appearance of the chancre and of the general manifestations of syphilis. This period of incubation of general symptoms, so called, is fixed within certain bounds, like the incubation of other infectious diseases. Its average duration is six weeks; it rarely exceeds three, and never six months; its shortest duration is about three weeks. A venereal ulcer will, therefore, be followed by general symptoms, if at all, probably within three, and certainly within six months. It is to be understood that this rule applies only to cases in which the natural course of the disease has not been interfered with by specific treatment. The administration of mercury for the primary sore may retard, or altogether prevent, the appearance of general symptoms.

6. Early general symptoms, especially in the absence of treatment of the preceding chancre, are very uniform in their character, and commonly consist of an eruption of blotches or papulæ upon the skin, pustules upon the scalp, swelling of the glands of the nucha, opaline patches (mucous patches) upon the mucous membrane of the mouth and fauces, condylomata about the anus, and alopecia, attended often by general malaise, headache, and fleeting pains in various parts of the body, (more particularly in the neighborhood of the joints,) which are most severe at night. These symptoms are especially worthy of remembrance, since they are often of so slight a character as not to fix the attention of the patient himself, and they should be carefully watched for after the occurrence of any venereal ulcer, the diagnosis of which was uncertain.

7. The secretion of secondary symptoms cannot, as a general rule, be inoculated upon the patient or upon any person under the syphilitic diathesis, but is contagious to individuals free from such taint. This rule is equally true of the secretion of the primary sore or chancre, and is the same that obtains in other infectious diseases, as small-pox, vaccinia, &c. Syphilis contracted from a secondary lesion pursues the same course as when contracted from a primary lesion, commencing in both cases with a chancre.

8. The remedies required for the treatment of syphilis are, for the most part, included under the head of mercurials, the compounds of iodine, and tonics.

9. Mercurials exercise their greatest power over the primary sore, and over early or so-called secondary symptoms. The action of the iodides is limited almost exclusively to the late or tertiary lesions. It is a mistake, however, to suppose that the compounds of iodine are alone sufficient for the permanent cure of even tertiary lesions, which are very prone to relapse, unless mercury has also entered into the treatment. The iodides are, therefore, to be regarded as temporary substitutes for, or as the adjuvants of, mercurials in the treatment of syphilis. They are of special value in syphilitic affections of the bones and periosteum; also in broken-down constitutions, when mercurials are inadmissible until a better condition of the system has been secured.

10. The value of tonics in the treatment of syphilis cannot be over-rated. Chemical analysis of the blood of syphilitic subjects shows an excess of albumen and a diminution of corpuscles; in short, a condition of chloro-anæmia obtains. The teachings of clinical experience are still more decisive. Nothing so obstructs the successful treatment of syphilis, and nothing so conduces to a relapse after an apparent cure, as a low condition of the general system. Hence the surgeon should aim to build up, and not to pull down; and this is to be accomplished by placing the patient under the most favorable hygienic influences, and by the use of tonics, as iron and quinine.

11. No one form of mercurial is adapted to all cases. The following formulæ are given as examples of those most frequently applicable:

R.—Pil. Hydrargyri, ʒj. Ferri Sulph. Exsiccat., ʒss. Divide into 30 pills. One three times a day.

R.—Hydrarg. Bichloridi, gr. ij. Tinct. Gentian. Comp., ʒiv. M. A tea-spoonful.

R.—Hydrarg. Protiodidi, gr. x. In 20 pills. One after each meal.

R.—Hydrarg. cum cretâ, ʒj. Quiniæ Sulphatis, ʒss. M. In 30 pills. One three times a day.

R.—Hydrarg. Bichloridi, gr. ij. Potass. Iodidi, ʒij. Tr. Gentian. Co., ʒij. Aquæ, ʒij. M. A tea-spoonful.

R.—Hydrarg. Bichloridi, Ammonia Muriatis, āā., gr. ij.; dissolve in a sufficient quantity of water, and add powdered cracker, q. s. Syrupi Acaciæ, q. s. M. In 36 pills.

12. The action of mercury upon the bowels should, if necessary, be restrained by the addition of opium or astringents; and, in some instances, the internal use of the remedy must be suspended and inunction employed.

13. Salivation is to be regarded as prejudicial to the success of treatment, and should be carefully avoided; although it is often justifiable, and even desirable, to excite slight tenderness of the gums, in order to be sure that the full effect of the remedy has been obtained. Salivation is most successfully treated by omitting the mercurial, securing freedom of the bowels, astringent gargles, and the internal administration of the chlorate of potassa, (ʒj.—ij. per diem in solution.)

14. Mercurial cachexia is rarely induced when the remedy is judiciously employed, especially if combined with hygienic treatment and the use of tonics. If, however, in any case, after improvement con-

tinued for a time, the appetite begins to flag, and the patient complains of malaise and mental depression, the administration of mercurials should be suspended, and afterwards resumed, if necessary to complete the cure.

15. The mode of using mercury which is the least likely to produce any of the above unpleasant symptoms is by inunction; and in very many cases this method will be found superior to all others. Its advantages are, that it rarely salivates; that it leaves the intestinal canal undisturbed, and does not impair the appetite; and hence that it may be used in cases of general debility and of extreme susceptibility to the morbid action of the mineral, when it is of the first importance to sustain the vital powers by a nourishing diet and the administration of tonics, without interference. About a drachm of the ointment should be rubbed into the axillæ and upon the inner surfaces of the thighs alternately every night, and the residue removed with warm water and soap the following morning.

16. The treatment of syphilis should invariably be conducted in a hospital. The dangers to be apprehended from exposure and hardship while pursuing a mercurial course are too great to admit of this treatment being undertaken in camp.

17. Little need be said with regard to the use of iodide of potassium, except that this salt should enter largely into the treatment of the later forms of syphilis, as syphilitic tubercles, gummy tumors, deep ulcerations of the fauces and larynx, and the affections of the bones and periosteum; but although, in some cases, it may constitute the only remedy specially directed against the diathesis, which is admissible for a time, yet in all, mercurials should be sooner or later employed.

18. Treatment should be continued until all syphilitic symptoms have disappeared, graduating its severity according to the effect produced and the general condition of the patient; and even after the last manifestation of the diathesis has passed away, experience teaches that treatment must be still further prolonged if the patient would secure immunity for the future.

19. The limits of this essay do not permit of reference to the special treatment adapted to the various syphilitic lesions. It is desirable, however, to call attention to the importance in syphilitic iritis of keeping the pupil constantly dilated by means of a solution of belladonna, (one scruple of the extract to an ounce of water, strained,) dropped into the eye every few hours. Moreover, in the treatment of this affection, a combination of tonics with mild mercurials (as, for instance, quinine with the gray powder,) will yield far more satisfactory results than the latter alone.

REVIEWS AND BIBLIOGRAPHY.

A Practical Treatise on Fever, or Selections from a Course of Lectures on Fever. Being part of a Course of Theory and Practice of Medicine; delivered by ROBERT D. LYONS, K.C.C., Professor of Practice of Medicine and Pathology in the School of Medicine of the Catholic University of Ireland; late Pathologist-in-Chief to the British Army in the Crimea, &c., &c., &c. Philadelphia: Blanchard & Lea. 1861. Octavo, pp. 362.

This is a reprint of a valuable work by a Dublin professor, which our American publishers have done well to bring before the American public. To show up briefly the subject-matter, we will transcribe the Table of Contents as follows: Chap. 1, General Observations; Chap. 2, General Pathology of Fever; Chap. 3, Classification of Fevers; Chap. 4, Simple Continued Fevers; Chap. 5, Varieties of Synovial Fever; Chap. 6, Typhus Fevers; Chap. 7, Typhoid Fevers; Chap. 8, Typhoid Fever of Crimea; Chap. 9, Yellow Fever; Chap. 10, Pathological Anatomy of Yellow Fever; Chap. 11, Yellow Fever of Lisbon.

This work exhibits two facts of prime importance in giving value to its contents; which are, first, that the author has read up to the knowledge of the day; and second, that he has himself a large experience upon the subjects treated of in his lectures. The subject of fever is not yet exhausted, nor is it likely to be, and every clever work upon it, perhaps to the end of time, will be a valuable addition to medical literature. This is a clever work, from which practitioners and students may derive much profitable instruction. We cannot promise them that they will discover in its pages precisely and unequivocally what fever is in its essence, but they will learn what the best pathologists and therapeutists have to say upon the subject.

"Galen," our author tells us, "asserted that the *essence* of a fever consisted in a *calor præter naturam*, or an increase of the animal temperature of the system to a degree greater than that of the physiological standard." The most advanced researches of modern inquirers can add nothing, he says, to this doctrine. The word fever, from *fervere*, to glow, is expressive of increased temperature. *Pyrexia* conveys the same meaning. "Now, the researches of modern chemistry," he proceeds, "seem to show that these names are in reality less metaphorical than they would at first sight appear to be. While, furthermore, it is proved that the animal temperature, whether in the physiological state of matter, or in the pathological state of dis-

ease, is maintained by a true process of combustion, in no essential respect differing from that which takes place in any ordinary fire, or other agency consuming oxygen and generating artificial heat."

We quote the above passage to let the author speak for himself, not to endorse it, for, in fact, we have no faith in the combustion theory. In our opinion, with many others equally luminous and dazzling, it is fairly *burnt out*.

What is fever? "It is not inflammation," says our author, in which he is undoubtedly right. We want a positive answer. Well, then, "Virchow seems to be fully justified in the statement that it is no longer doubtful that in the *calor præter naturam*, as stated by Galen, *is the substance of fevers*." Perhaps so, but we think in the following paragraph, Virchow's views more nearly coincide with the state of our knowledge.

"If, then, with Virchow, we regard *increased heat as the pathognomonic symptom* and the *essential condition of fever*, (Italics ours—REVIEWER,) and consider it to be dependent on increased metamorphosis and increased consumption of the constituents of the body, we have yet to seek the cause of the increased action in the system. This cause, the *causa proxima* of fever, Virchow regards as internal, and connected with the body itself, in contradistinction to the external cause acting on the body from without. Various changes in the constitution of the blood, productive of a *materies acris*, feverstuff, *pyretogen* of Eisenmann, have been assumed as the causes of fever; but while we hold that in many cases some such change is actually produced, we are not yet in a condition either to determine its precise nature, or to understand how it is itself brought about."

The author thinks we must look to the nervous system for the first indications of change, before any part of the circulating apparatus is involved. Speaking of the "state of the nerves in fever," he again calls in the support of the German pathologist.

"Fever, thus, in the opinion of Virchow, essentially consists in an increase of temperature, which is caused by an increased consumption of organic material in the system, and appears to have its origin in certain changes in the nervous system. These changes may be considered to affect primarily the regulator or moderator functions of the nerves, and to be of a paralytic nature. It is probable that the *vagi* nerves, and, we would add, the sympathetic, are primarily, if not chiefly, engaged in the production of the febrile phenomena."

Leaving the matter of the essence of fever, we will pass on to considerations of a more intelligible, if not of a more interesting charac-

ter. We do not propose to trouble the reader with long quotations from Dr. Lyons' work, but the following paragraph is so expressive of sound views, that we are sure it will find acceptance.

"While I believe it can be said with truth that we can *cure* many inflammations by the intervention of our art, the same cannot be affirmed of fevers. In fevers, the highest efforts of our art, the most delicate care, the most refined skill, the most sure appreciation and adaptation of means to ends which we can command, must all be directed to watching, supporting, maintaining, and, it may be, stimulating the system till the fever-storm shall have passed over it. In fever cases, your duties as practical physicians will be like those of the sailor whose ship is riding out the gale. With firm hand and ready eye, he is prepared for every emergency that can arise; but he neither puts on sail nor close-hauls his ship till the actual moment of danger arises. It must be the same with the physician in the management of fever cases; he must act on the *defensive*, and not on the *offensive*. Press your ship too much, and she founders; meddle but never so little too much with the fever, and your patient dies."

We consider the above a very good summary of the principles of treatment to be observed in continued fevers. In other words, they are best treated by expectation.

Our author, in the course of his work, gives very full descriptions of the various forms of fever, as indicated in the table of contents; and he is profuse in details of morbid anatomy from his own dissections. Sometimes, indeed, he exceeds what is useful or necessary, especially in making records of post-mortem examinations, where no previous history of the case is given.

His treatment of disease is generally eminently judicious.

We cannot always commend his style, for it is now too rhetorical, and again unpardonably careless; in some cases we find errors of omission; as, for instance, where he recommends from half a drachm to two drachms of carbonate of ammonia in a decoction of polygalaseneke, as a valuable remedy in typhoid bronchitis. He does not tell us whether this is to be taken in one, or twenty doses. He may leave this to the discretion of the reader; but if so, why specify any quantity?

His statements are often wanting in method and precision, and now and then he offers opinions which are superfluous in themselves, and which rest upon very slight foundations. Thus, he has formed a "notion" ("but I in no way insist upon it as a well-grounded hypothesis;" he says,) that sthenic types of fever prevail most among

the graminivorous and herbivorous races of men, "while the putrid or typhous types of febrile action more readily develop themselves in the races amongst which animal food constitutes a large part of their ordinary aliment."

This is indeed a singular notion for an Irish physician. He uses, elsewhere, typhus fever and Irish fever as synonyms. Now, large numbers of the humbler classes of his countrymen rarely eat meat, yet they are exceedingly obnoxious to this form of fever; while in this country, where those of them who come among us, as well as our entire native population, eat meat without stint, typhus fever is almost unknown. But he gives, himself, the best refutation of his notion when he says, in the *great famine fever visitations of Ireland* in 1846, 1847, and 1848, *maculated typhus was the disease which principally prevailed*. He asserts this upon his own "large and extended experience."

We do not make these critical remarks in any spirit of fault-finding, but simply because we think so skillful a physician, and so clever a writer as Prof. Lyons, should take more pains to do himself justice.

In a supplementary chapter relating to the appearance of yellow fever at Lisbon, in 1857, the author brings sufficient proof to show that the disease originated there, and that it was not brought from abroad. He tells us, *inter alia*, "that all parts of the city attacked by the epidemic presented in common certain conditions of insalubrity, which may be classed as follows: A. Defective water supply. B. Total absence or incompleteness of house-drains, privies, and a consequent uncleanly state of the streets. D. Badly-constructed dwellings, with deficiency of light and air, and want of thorough ventilation. E. Absence or defective condition of tertiary and secondary sewers," &c.

These are but a few of the local conditions which gave origin and fatality to that epidemic.

We do not know if there are now any believers in the contagiousness of yellow fever. Our author tells us of the unrestrained intercourse between the City of Lisbon and the neighboring places during the prevalence of the epidemic, without any communication whatever of the disease.

The experience of our physicians in Baltimore bears the same testimony. We saw in this city, in September, 1855, as formidable and as fatal cases of yellow fever as we had ever seen or heard of in hot climates, brought here from Norfolk, which was then ravaged by the disease. There was no propagation of it whatever. Previously, in July, 1847, it was our fortune to spend some weeks in camp at Vergara, on the sea-beach, three miles from Vera Cruz, with about twenty-

six hundred troops of all arms, bound for the interior. The fever was raging in the city while in camp; notwithstanding the continuous communication, not one single case occurred. While the surgeons within the walls of the town were battling with the yellow fever, we, in the camp, had little else to contend with than diarrhœa and dysentery, which, indeed, gave us abundant occupation.

In taking leave of Dr. Lyons' work, we can assure the reader that it is one well worthy of study, notwithstanding certain defects, to which we have made sufficient reference.

R. M'S.

Nouveau Formulaire Magistral, précédé d'une notice sur les Hôpitaux de Paris, de généralités sur l'Art de formuler, suivi d'un précis sur les eaux minérales naturelles et artificielles, d'un mémorial thérapeutique de notions sur l'emploi des contre-poisons et sur les secours à donner aux empoisonnés et aux asphyxiés. Par A. BOUCHARDAT, Professeur d'Hygiène, etc. Dixième Édition. Paris: Baillière. 1861. 16mo, pp. 589.

New Medical Formulary, with an Introduction containing a notice of the Paris Hospitals, of the Preparation of Prescriptions, &c., &c. By Prof. A. BOUCHARDAT.

This valuable formulary of Bouchardat, although but little known in this country, has been before the public since 1839. The tenth edition is revised and improved, containing, among other things, some of the formulæ used in the preparation of certain quack compounds, whose virtues have been much lauded by their manufacturers. The book is a model of conciseness and accuracy—a true *multum in parvo*. It would be impossible within the space allotted us to give more than a general idea of its contents.

The author properly considers a magistral formulary as the complement to treatises on *Materia Medica* and Pharmacy. It brings into practical employment all the knowledge contained in the latter—exhibiting the combinations of remedies or *recipes* which are habitually kept on hand in the shop—that is, those which are *officinal*, and also such as have been recommended by eminent practitioners as especially serviceable to meet certain morbid conditions. Bouchardat's book furnishes us this kind of information from a field not always convenient to the English practitioner, being rich in gleanings from the French hospitals and private practice. He classifies his formulæ according to their therapeutic value, so that the reader may have the opportunity of comparing different formulæ for the purpose of selecting those which

are best suited to the wants of the particular case under treatment. The general properties of the different classes of therapeutic agents are also given, and their *modus operandi* on the animal system. The book is, on this account, of equal value to the practitioner and the pharmacist.

Every one has seen the advertisements of an English quack remedy known as *Holloway's Pills*—which set forth the most marvelous virtues of the same, almost inducing the belief that they may be specific in all the diseases to which poor mortality is heir. It is amusing, however, to find that this cathartic remedy is, after all, nothing but a compound of aloes and rhubarb, with some rather unimportant additions, and, on the whole, much inferior to the Pil. Cath. Comp. of our Pharmacopœia. The formula is as follows: R.—Aloes, grs. lxii.; Pulv. rhei, grs. xxvi.; Piperis, grs. viii.; Croci, grs. iij.; Sodæ sulphat., grs. iij. Fiat massa, in pilulas cxliv. dividenda. Preparations of coal tar, the disinfectant which became so popular in France about a year since, glyceroles and propylamin, are introduced in this edition for the first time.

The general directions for the treatment of cases of poisoning and of asphyxia from drowning are of great practical value for the profession. We should like to see an American edition of the book, somewhat modified, to suit our own wants; but it is hoping against all reasonable expectation, and we must therefore suggest to our readers who are at all acquainted with French, to add this little pocket volume to the books already on their shelves. Bouchardat publishes an Annual, containing the yearly contributions to therapeutics and toxicology, as well as new formulæ, with the title of *Annuaire de Thérapeutique*, which also demands careful examination at the hands of the busy practitioner who has but little time to examine journals.

L. H. S.

Wheat, its Worth and Waste, with Original Microscopic Illustrations. By WM. HAND BROWNE and THOS. J. HAND. New York: Printed for Hand, Thomas & Co., by Torrey Brothers, 13 Spruce Street. 1862.

The Theory and Art of Bread-Making. A New Process, without the Use of Ferment. By E. N. HORSFORD, Rumford Professor in Harvard University, Cambridge. Cambridge: Welsh, Bigelow & Co., Printers for the University. 1861.

The duties of the physician, and the responsibilities of Medical Science, do not end with giving pills, or treating disease. Hygiene, as

well as Therapeutics, claims their attention, and in latter days has received a fair share of it. No other body of men, certainly, have devoted themselves so untiringly to the great questions of sanitary reform, although such movements are directly opposed to their pecuniary interests. Prominent among these questions is that of the Hygiene of Food. It is one which has not comparatively received that degree of consideration which it deserves at the hands of the profession. There is certainly none more intimately connected with the physical well-being of the entire race.

The publication by the *London Lancet* of the investigations of the Commission on Adulterations in that city evidences the interest which is felt in the subject by our medical brethren on the other side the Atlantic, while the researches of Dr. Hassall in the same field have entitled him to our lasting gratitude. But if there is one article of all others on the perfecting of which the physical well-being of the human race depends, it is that to which the least degree of scientific attention has been given, viz., the art of preparing the staple, *Wheat*, to be eaten.

The grinding of flour and its conversion into bread have been known so immemorially, and considered so simple, that Science has not troubled herself to inquire whether the methods for effecting these objects were not susceptible of improvement. What has been done in this line has been attempted generally by unscientific men, and has consequently fallen to the ground.

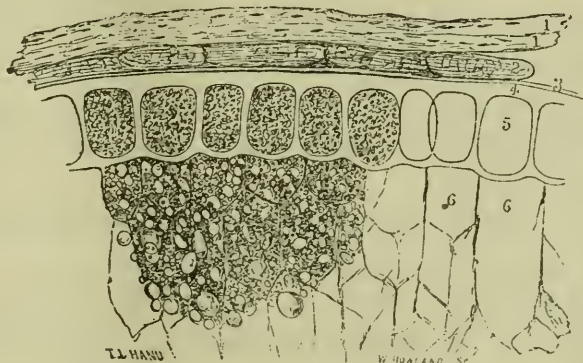
Two little treatises have been recently placed in our hands, both having in view the same object—the introduction into our bread of more *gluten* and a greater proportion of the *phosphates*, both very important constituents of animal nutriment. The means, however, which they propose to accomplish this end are very different. The one entitled “Wheat, its Worth and Waste,” by Wm. Hand Browne and Thos. J. Hand, simply aims to preserve these elements which God has stored away for our use, most abundantly in this cereal, and which we most blindly throw away. The other, called the “Theory and Art of Bread-Making,” is from a no less well-known *savant* than Prof. Horsford, of Cambridge. Its aim is to do away with the use of ferment, substituting in its place a chemical agent which, while by the generation of carbonic acid, it produces all the useful effects of yeast, at the same time saves a portion of the gluten from destruction by the fermentative process, and adds the phosphatic element.

The first plan must meet the unqualified approval of every one who will take the trouble to inquire into its principles. All writers

coincide in attributing the superiority of wheat over other grains as a nutrient to the greater amount of gluten which it contains. Chemists and physiologists alike declare gluten to be “easy of digestion”—“highly nutritious”—“itself satisfying complete and prolonged nutrition.” Nor does its importance end here—it is essential to the making of a light loaf. Messrs. Hand and Browne tell us that “the part which the gluten plays in this process is three-fold: it absorbs the water, retains the gas, and expands in baking. So peculiar to the gluten is this power of absorbing water, that a ‘strong’ flour (or one rich in gluten) may be known by the quantity of water it takes up in the mixing: in other words, a flour will absorb water just in proportion to the gluten it contains. Hence the value of a strong flour to the baker, as by its absorption of water it yields a greater weight of bread, or can be used to enrich a poor, starchy flour; while the consumer, although in purchasing such bread he buys more water to the pound, actually loses nothing, but is a gainer by his bargain, as the richer the bread is in gluten, the more nutritious is it, and at the same time more palatable.”

Now, microscopical investigation shows most conclusively, what has long since been imagined, that almost the whole of the gluten is contained in the outer coating of the kernel, while the interior is almost pure starch. Mr. Hand’s microscopical illustrations of this subject are so novel, and so exquisitely drawn, that we avail ourselves of his permission to present some of them to our readers. The following cut shows the comparatively small space occupied by the innutritious husk, or true bran, with the rich layer of gluten-cells lying between it and the starch-cells which compose the mass of the grain.

FIG. 1.



Portion of Transverse Section of White Wheat, 150 Diameters.

- | | |
|--|---------------------------|
| 1, 1, Double cellular coat, outer True Bran, | } BRAN OR HUSK
proper. |
| 2, Single cellular coat, inner True Bran, | |

- 3, Testa; a filmy cellulose membrane.
- 4, Inner cellulose membrane, covering gluten-cells.
- 5, Sack-like cells, containing GLUTEN, (some shown with gluten removed.)
- 6, Cells forming the central mass, containing STARCH, with some gluten, (contents of some cells removed.)

FIG. 2.

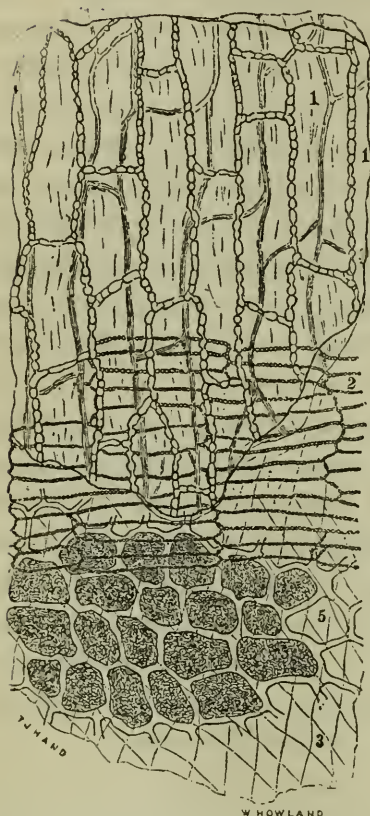


Fig. 2 exhibits the successive coats, freed from adhering starch-cells, under a magnifying power of 150 diameters, the outermost being nearest the observer's eye.

1, The outer true bran, (sarcocarp,) composed of a double layer of cells, elongated parallel with the axis of the grain.

2, Under this double coat is seen the inner true bran, (endocarp,) with its delicately beaded cells lying at right angles to those of the outer coat.

3, The testa is next perceived, overlying and extending beyond the group of gluten-cells.

5. This, the first layer of cells, consists of a series of separate sacks, compressed by crowding into irregular shapes, and averaging $\frac{1}{675}$ of an inch in diameter in the specimens examined.

These sacks are filled with gluten, mingled with a small proportion of oily and albuminous matter; the gluten being in the form of minute granules, about $\frac{1}{15000}$ of an inch in diameter. When the sacks are ruptured and the contents forced out, the particles of the latter adhere to each other with great tenacity.

Prof. Horsford gives the following chemical test for determining the comparative limits of the starch and the gluten:

"If a cross-section of wheat be exposed for a short time to the action of a solution of ammonio-sulphate of copper, the gluten will be impregnated with a green compound. The extent of the green compound, which is coincident with that of the gluten, will be found to be limited to a thin envelope immediately within the bran proper.

If another cross-section be exposed for an instant to the action of a solution of iodide of potassium, to which a few drops of nitric acid have been added, it will become deep violet wherever the starch granules occur, and the extent of the starch will be found to include the entire space within the thin envelope of gluten. Microscopic examination shows the gluten to be disposed in one continuous layer of cells, with no intervening starch granules, and the chemical tests show that the gluten-cells penetrate the starch but slightly, if at all."

But not only does this layer contain the greater part of the gluten; the phosphates also lie hidden in its pregnant cells. Says Prof. H. farther:

"A glance at these figures will explain why Mayer found fourteen times as much phosphoric acid in commercial bran as he found in commercial superfine flour. The bran carried with it most of the layer of gluten in which the phosphates and the companion nitrogenous compounds—the sources of living tissue—are lodged; while the superfine flour consisted chiefly of starch, but little of the gluten having been detached from the bran. Mège-Mouriès found the gluten coat to contain ten per cent. of nitrogen, while the average of the whole berry is from two to three per cent.

"A glance at these figures will also show why the bread made from Graham flour, and the Pumpernickel of Westphalia, which is also made from unbolted meal, and the black bread of like origin found in the sacks of Russian soldiers in the Crimea, are so nutritious, in spite of their heaviness and sourness. They contain *all* the gluten as well as starch of the grain. All the phosphates and nitrogenous compounds of the grain enter into the bread when the bran is not separated from the flour, instead of a small fraction only, as in bread made from superfine flour."

Prof. Johnson discourses thus upon the same subject:

"It will not be denied that it is for a wise purpose that the Deity has so intimately associated in the grain the several substances which are necessary for the complete nutrition of animal bodies. The above considerations show how unwise we are in attempting to undo this natural collocation of materials. To please the eye and the palate, we sift out a less generally nutritious food, and, to make up for what we have removed, experience teaches us to have recourse to animal food of various descriptions. It is interesting to remark, even in apparently trivial things, how Nature is full of compensating processes. We give our servants household bread, while we live on the finest of

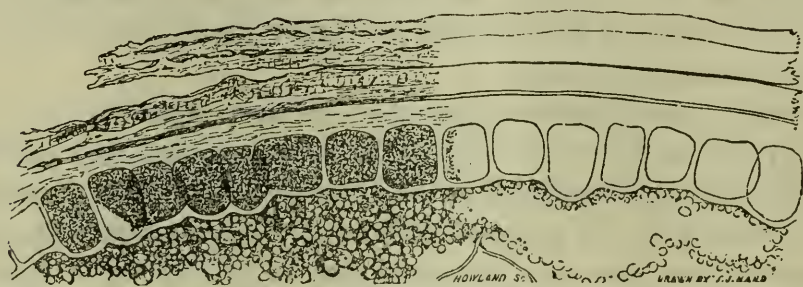
wheat ourselves. The mistress eats that which pleases the eye more; the maid, what sustains and nourishes the body better."

It is asserted by Mr. Hand that, in the present mode of grinding, the gluten is thus, almost all of it, thrown away in the bran. He says:

"Careful experiments have shown that the husk, or innutritious part of the wheat, is from about 2 to 5 per cent. of the weight of the whole grain; consequently, in 270 lbs. of wheat, the average quantity required to make a barrel of flour in the present mode of milling, there should be an average loss of about 10 lbs., every particle of the grain, except this husk, being convertible into flour. *At present, the ordinary weight of bran and offal to the barrel of flour is sixty to seventy pounds.* And of what does this needless loss consist—what element of the grain is thus wantonly thrown away? IT IS THE GLUTEN.

"We have seen, in the structure of the grain of wheat, that the principal mass of the gluten lies between the husk and the starch. Now, when the grain is crushed between the mill-stones, the layer of gluten sacks breaks up into fine scales, which adhere firmly to the husk, but readily detach themselves from the crumbling starch. Part of these scales, by the continuous attrition of the burrs, are torn from the husk and enter the bolting-cloth, which, from their irregular shape, they pass through with difficulty, and much more slowly than the round granules of starch; on which account, the 'head' and 'tail' of the bolting, as every miller knows, must be mixed together, to give a good flour.

FIG. 3.



Transverse Section of a Scale of Millers' Bran, magnified to 150 Diameters; drawn under the Camera Lucida, part being left in Outline only.

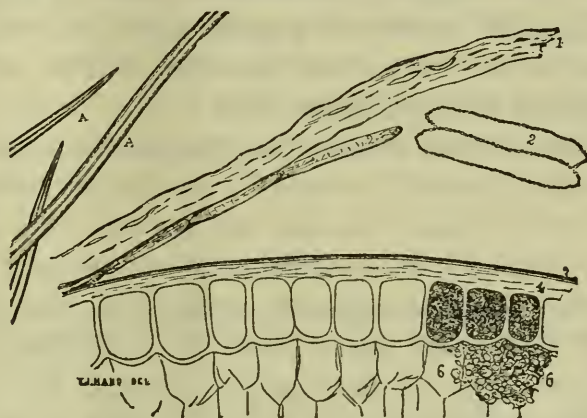
"But the larger proportion adhere to the husk, and with it are separated from the flour in the form of bran and offal, as may easily be seen by an examination of fresh wheat bran, where the inner surface will be perceived to be coated with a fine varnish of gluten, if, indeed, this is not concealed by a layer of adhering starch.

“The loss by this mode of grinding, the waste of this precious gift of Nature to the human race, is incalculable—literally incalculable. If it were merely a loss of *flour*, the figures would be startling—fifty or sixty pounds on every barrel of flour in the world are no trifling amount—but it is a loss of the *nutritious element* of flour; of the life-sustaining principle itself.”

Finally, he claims, not to follow him through his entire discussion, that a process has been discovered by a citizen of the United States, by which the *true bran*, consisting, for the most part, of lignin, and therefore innutritious, irritative, liable to acetic decomposition, and often covered with smut, the larvæ of insects, must, etc., *can be peeled off from the surface of the gluten*, leaving the grain with a beautifully smooth and polished appearance, and quite free from dust, smut, or any other contamination.

The following drawing shows the effect of this process on the kernel:

FIG. 4.



Portion of Transverse Section of Unbranned Wheat, 150 Diameters.

[This specimen has been taken before the operation of unbranning was complete, in order to show at what point the separation takes place.

1, 2, True bran, not yet detached at one extremity—150 diameters.

2, Detached cells of inner true bran, presenting their sides—150 diameters.

A A, Portions of hairs from the *brush*—100 diameters.]

We feel constrained to express our entire assent to the proposition of the author, that “the saving of this immense quantity of Nature’s most perfect food is a boon to the whole human family;” and consider that, in doing our small share towards making it more widely known, we have greater claims to gratitude than if we had announced the discovery of a dozen “new remedies.”

Prof. Horsford takes the ground that the only object effected by the ferment, whether leaven or yeast, is the production of the mechanical expansive action by means of the carbonic acid evolved. But the process of fermentation is liable to the following objections:

- 1st. Partial liquefaction and destruction of the gluten.
- 2nd. The production of acids—*lactic*, *acetic*, etc.
- 3d. The presence of poisonous microscopic fungi.
- 4th. The impossibility, owing to these and other causes, of producing uniformly good bread.

The processes of Mège-Mouriès, (who employed extract of bran or groats as a source of ferment,) and of various experimenters who have attempted to introduce chemicals into the dough, which would produce the requisite amount of carbonic acid by their mutual reaction, are then detailed, together with the objections to them.

He then continues:

“In view of the foregoing, the question naturally suggests itself, May it not be possible to return a wanting ingredient, or add a nutritive constituent to the bread, at the same time that the raising of the loaf is accomplished as an incidental effect?

“This problem has been subjected to experimental solution.

“The idea which directed the research was the production, each by itself, of the two ingredients, the acid and the base of a normal salt, present in the cereals and all healthful food, and essential to the production of all the important organs of the body, in such form that the two mixed with flour would remain inert till the addition of water or the application of heat, and then unite to establish the normal salt, evolving incidentally carbonic acid from the midst of the dough, to make the bread porous.

“Of all the salts taking part in vital processes, the most important are the phosphates. They enter into the composition of the bones, the muscles, the nerves, the brain, and indeed of every higher tissue; and wherever an important function is to be performed, there nature has supplied a store of phosphates. They are present in all the forms of substantial food. Aside from the great prominence now given by the medical world to the use of the various forms of soluble hypophosphites, it is well known that finely prepared phosphate of lime, eaten as such, greatly aids the growth and firmness of bones and teeth. Fractured bones are reunited much more promptly upon a diet into which pulverized bone enters as a prominent constituent. The excess of phosphates in the secretions of the kidneys consequent upon extreme

mental exhaustion, has led to the use of some form of phosphorus to renew the cerebral and nervous fibre."

After dwelling upon the deficiency of the phosphates in ordinary flour, he suggests that, "to secure the more important of these in the bread, with the incidental evolution of carbonic acid, it is only necessary to mix together with the flour a dry, highly acid phosphate of lime, which is phosphoric acid and neutral phosphate of lime, and dry bicarbonate of soda, in such proportions as shall leave a neutral phosphate of lime, and phosphate of soda after the dough has been thoroughly kneaded and baked."

The objection to all such methods has generally been, the too great rapidity of evolution of the gas, causing it either to escape, or to collect in very large globules, not permeating the mass of the dough thoroughly, and hence leaving it heavy and indigestible; and the difficulty of mixing the chemical intimately with the flour. Whether this is overcome in the "*New Method*," must be a question of experience only. Prof. H. claims that the bread thus made is both lighter and more digestible, as well as more nutritious, in consequence of the acquisition of the phosphates. The idea is certainly a most ingenious application of chemistry to the wants of daily life, and deserves a fair consideration and trial.



The Physician's Visiting List, Diary, and Book of Engagements, for 1862. Philadelphia: Lindsay & Blakiston, 25 South Sixth Street, above Chestnut.

The Physician's Hand-Book of Practice, for 1862. By WILLIAM ELMER, M.D. New York: W. A. Townsend, Publisher, No. 39 Walker Street. 1862.

The Physician's Pocket Memorandum, for 1862. By C. H. CLEVELAND, M.D. Cincinnati: Bradley & Webb, Printers. 1862.

The Physicians', Surgeons', and General Practitioners' Visiting List, Diary, Almanac, and Book of Engagements for 1862, upon a Plan furnished to the Publishers, by FRANCIS SEYMOUR HADEN, Esq. Sixteenth Year. London: John Smith & Co., Medical Publishers, 52 Long Acre.

Agenda Médical, pour 1862. Paris: P. Asselin, gendre et successeur de Labé, Libraire de la Faculté de Médecine, Place de l'Ecole-de-Médecine.

Sächsischer Medicinal-Kalender für 1862. Herausgegeben von RICHARD HAGEN. Leipzig: Verlag von Christian Ernst Kollmann. 1862.

Though rather later than usual, we do not fail to call the attention

of our readers to the year's Visiting Lists. We have watched their gradual rise as a class into professional favor with much interest, as evinced from year to year in our pages. We have gladly given them a helping hand and word of cheer, and now rejoice to find that they have become an "established institution," which the majority of physicians "would hardly know now how to get along without." On previous occasions we have spoken of them at length, both collectively and individually. We have given the readers of the MONTHLY our opinion repeatedly as to the merits and more or less grave objections appertaining to some of these publications, and have even on one occasion drawn the outlines of our ideal of a memorandum of this sort. If the times had not been so entirely out of joint as to forbid new commercial enterprises, we might perhaps have been inclined to materialize our ideas into an addition to their number. Not to repeat what we have already said of them, (for we do not find that any of them is, except as to date, essentially different from its appearance in previous years,) we would inquire of each reader if he uses a Visiting List, and if the answer of any one should be in the negative, to him we would say: Lose not another day, but obtain one at once; fill its blanks faithfully, and at the end of the year you will be a better and a wiser man !

EDITORIAL AND MISCELLANEOUS.

THE SANITARY CONDITION OF THE ARMY appears to be, on the whole, satisfactory. All along the Potomac, reports reach us of the good condition and spirits of the troops. At Port Royal, there seems to have been a good deal of gastric or typhoid and malarious fever, and some suffering from the want of proper hospital accommodations. But considering the large body of troops there, and the fact that they are nearly all of them recent recruits, the number of unserviceables is not large.

Dr. Andrew, who accompanied the expedition, on the appointment of the Sanitary Commission, writes in his Report to Mr. Olmsted: "The singularity is not that there has been so much, but rather that there has been so little, of sickness in the army, and that in spite of all, its health is rapidly improving. The diseases which have been most frequent and fatal are of malarious origin. The fevers in some cases take on the intermittent type, but are more generally remittent. Very many cases of congestion have occurred, the attack being fre-

quently so grave that reaction cannot be established, and the patient dies in the first stage.

Thirty-eight of the 124 deaths which have occurred since the occupation of Hilton Head on the 7th of November—a list of which, to Jan. 6, was kindly furnished me by Dr. Cooper, Medical Director—are from this cause alone. After this, we have in the order of their mortality:

Typhoid fever	25
Diseases of lungs and air-passages	22
Various diseases and measles	10
Diseases of digestive organs	9
Gun-shot wounds	5
Remittent fever ..	4
Typhus fever	3
All others	8
Congestive fever	38
Total	124

A correct nomenclature of the diseases here reported would doubtless change the list, somewhat increasing the number of cases of typhus and remittent fever, at the expense of the typhoid. I saw one case of undoubted typhus which appeared on the hospital record as typhoid, and the Surgeon assured me that one had died bearing the same characteristic symptoms, and which I notice he has reported as typhoid fever. The same lack of discrimination which is observed in this locality between typhoid and remittent fever in its graver forms exists among the surgeons of the Expeditionary Corps."

From the West the accounts are not so encouraging. Carelessness, the absence of proper sanitary regulations, and in many cases, doubtless, of the means for enforcing them, together with exposure to the inclemency of the season, have not only placed many upon the sick list, but have run up a very large bill of mortality. The Sanitary Commission have an active worker there at present, in the person of Dr. Douglas, and we hope soon to hear of the results of his visit in an improved state of affairs and a cleaner bill of health.

The report of the Sanitary Commission, submitted to the Secretary of War, by the General Secretary, Mr. Frederick Law Olmsted, at the end of the year and of the first seven months of its service, is full of the most valuable information on this subject, and is, on the whole, of a very gratifying nature. It leads us to the conclusion that the Army of the Union is unquestionably more vigorous and enduring in

bodily powers to-day than at any former period; and that our forces may, by proper care, be kept in full and constantly increasing vigor. Among the evils which it points out, are: Carelessness, or entire neglect in inspection of recruits. We quote:

"In fifty-eight per cent. of the regiments, there had been no pretence of a thorough inspection of recruits on enlistment. In only nine per cent. had there been a thorough reinspection when or after they were mustered in. The Commission took occasion soon after its organization to address the Governors of all loyal States on the need of more rigorous inspection of recruits. It is unfortunately certain, however, that this important duty has continued to be generally neglected or superficially performed. A careful examination of the causes officially assigned for the discharge of 1,620 men, from the army of the Potomac, as unfit for service, during the month of October, made by a Committee of the Inspectors of the Commission, experienced in observation of military hospitals, leads to the startling conclusion that fully fifty-three per cent. of the whole number were thus discharged on account of disabilities that existed at and before their enlistment, and which any intelligent surgeon ought to have discovered on their inspection as recruits."

We are glad to see that the Commission are awake to the vast injury, in a sanitary point of view, which vicious soldiers are capable of inflicting. They say: "The mere presence in camp of half a dozen dissolute, insubordinate and ruffianly men, tends very much to retard the progress in discipline of the whole command. They set an example of unwholesome indulgence of every kind, thwart all measures for the sanitary improvement of the camp, are the first subjects of disease, and the first to turn their backs on the enemy. Whatever disloyalty and desertion have occurred among our soldiers, may generally be traced to persons of this class. It is to be hoped that all such will hereafter be rigorously excluded from the people's army."

Imperfect ventilation of tents at night is thus alluded to: "Tents are seldom tolerably ventilated at night. Of the regiments under consideration occupying the wedge tents, none were found in which the Inspectors were satisfied that proper attention was paid to ventilation, and it was obvious in some cases that the men suffered in health in consequence. The Sibley tent is more convenient of ventilation, and cannot as well be tightly closed as the wedge form. The Commission warned the Department, in August, of the evil likely to ensue from the difficulty of ventilating the wedge tents. It is now found that typhus is occurring more frequently in the regiments occu-

pying these tents than in those that have the Sibley—the ratio being 29.5 to 23. The Inspectors have advised the striking of each tent once a week, for the purpose of giving it a perfect cleansing and airing, and the practice is being of late quite generally adopted.”

A somewhat singular result is arrived at with regard to the flooring the tents, as affecting the health of the men. If it should be positively proved that the use of india-rubber blankets tends to the production of typhoid fever, by preventing the escape and producing reabsorption of the emanations from the body, a knowledge of the facts would save a great expense to those who can ill afford it, as well as a loss of life.

“Twenty-four per cent. of the regiments were provided with tent-flooring of boards, twenty per cent. with india-rubber cloth; in twenty-one per cent. straw or branches were used for this purpose; and in thirty-five per cent. the men slept on the ground. A limited examination of the diseases of the army indicates that the largest proportion of those of typhoid type occur with regiments sleeping on rubber blankets, the least with those on straw or boughs; the largest proportion of catarrhal with regiments on wooden floors, the least with those on the ground; the largest of rheumatism with those on wood, the smallest with those on straw or boughs; the largest of malarial with those on the ground, the least with those on straw or boughs. In eighty per cent. of the camps, they are reported to be properly arranged, and kept in proper order, no offensive odor drifting from them. In twenty per cent., proper attention was not given to them, and the health of the men was more or less seriously endangered in consequence.”

Neglect of personal cleanliness, the use of intoxicating liquors, and lax discipline, are referred to as pregnant causes of disease.

The Sanitary History of Bull Run, found in the Appendix to the Report, is a curious and interesting document. We have not space to give anything more with regard to it than the following extract with regard to the “Causes of Exhaustion” during and after the battle:

“In explanation of the alleged excessive exhaustion of the men towards the close of the battle, the officers consulted in twenty-six of the twenty-nine regiments referred to, attributed it to fatigue and heat, twenty-one to lack of food and drink. All the reports which assigned insufficiency of food and drink as a cause, also assigned excessive fatigue. Six of them assign fatigue, and especially the march at double-quick, as the main cause of the exhaustion which was manifest during and just after the battle.”

— We reprint in this number the very valuable "Report on Venereal Disease," published by the Commission, for distribution among the Surgeons of the Army. It is from the pen of Dr. Bumstead, and sustains his reputation as a syphilographer. We may mention in this connection the appointment of this gentleman as Surgeon to the N. Y. Eye Infirmary, *vice* Dr. Gurdon Buck, resigned.

— ACADEMY OF MEDICINE.—At the meeting of January 29th, the following gentlemen were chosen delegates to the New York State Medical Society, which meets on Tuesday, Feb. 4th, according to law: Drs. JOHN W. GREEN, O. WHITE, JARED LINDSAY, and J. P. GARRISH.

The following timely resolutions were introduced by a prefatory note from the venerable Dr. Mott, and unanimously passed; and on motion of Dr. Adams, the delegates to the State Society were directed to introduce the subject there, at the coming meeting:

SIR—We have all been annoyed with the intimation that the noble Surgical Staff of our Army might be polluted with Homœopathy. We all honor the regular profession, and when an attempt is made to impair its usefulness, or detract from its dignity, we should promptly and unitedly repel it.

Influenced by these sentiments, I forward to you the accompanying resolutions, and beg you to introduce them at the meeting this evening, as coming from me. A broken metacarpal bone prevents my presenting them in person.

Yours truly,

VALENTINE MOTT.

1 GRAMERCY PARK, Jan. 29th, 1862.

"Whereas, Petitions have lately been presented to the Senate and House of Representatives of the United States, for the employment of Homœopaths as Surgeons in the Army: therefore,

"Resolved, That the New York Academy of Medicine deem it their duty, in the interest of the Army, respectfully to protest against the employment of such practitioners, for the following reasons:

"1st. That the practice, wherever subjected to accurate observation, has failed to establish itself in any hospital.

"2d. That in the countries where it originated and attained its fullest degrees of development, it has not been introduced into the army or navy.

"3d. That it is no more worthy of such introduction than other kindred methods of practice as closely allied to quackery.

"4th. That such appointments would dissatisfy and dishearten the Medical Staff of the Army, who understand the true character of Homœopathy, and who have entered the service of their country with confidence that the Government would strive to elevate the standard and promote the efficiency of the Medical Staff—results surely to be defeated by the appointment of Homœopaths.

"Resolved, That a copy of the above resolutions be sent to the Hon. IRA HARRIS, of the U. S. Senate, and the Hon. F. A. CONKLING, of the House of Representatives, with a request that the resolutions be presented to the two Houses of Congress."

We sincerely trust that this action will be the forerunner of similar

protests from Societies in every part of the country. Homœopathy has been too thoroughly damned by every governmental commission in Europe to have it fastened on to our own military system at this late day.

— The *Metropolitan Health Bill*, is another matter of prime importance which will be brought before the State Society. Its most noticeable feature is its topographical comprehensiveness. It embraces within its provisions three entire counties, those of New York, Kings and Richmond, and thus guards all the approaches to the city. This alone places it far in advance of any other bills that may be offered; for, in addition to the scandalous means which were successful in defeating it last year, other bills have been prepared, which will be brought before the Legislature this winter, with a view of distracting the attention of that body and introducing side issues. One of these emanates from the office of the City Inspector, and was, in fact, embodied in his report. Its principal provisions are as follows:

I. The abrogation of all powers, as at present vested in the Common Council, over the sanitary affairs of the city.

II. The sole power to be vested in a Board of Health, to consist of the—

Ex-officio—Mayor;

“ City Inspector;

“ State Health Officer;

“ Chairman of the Commissioners of Public Charities and Corrections;

“ President of the Commissioners of Emigration;

“ Presidents of the Five Dispensaries; and

Three Physicians, to be chosen by each of the Boards of Trustees of the Five Dispensaries.

Total, 25—Physicians, 15; Laymen, 10.

III. Twenty-two Health Wardens, to be Physicians.

The introduction of Dispensary Physicians, who have a better opportunity than any other men in the community of knowing the exact sanitary condition of the city, into the Health Board, is certainly an idea worthy of consideration, and we doubt not, would receive it from those who might be appointed to carry out the provisions of the bill first referred to; but to compose the entire medical side of the Board of such physicians, would, in our opinion, be an error. One Visiting Physician from each Dispensary would be of equal service with five. But as this bill has no chance of passing, it is not worth while to discuss its provisions. We have noticed it, that our readers may appreciate its object, and use their influence with legislators to thwart it.

—DEATH OF THE INVENTOR OF THE STOMACH-PUMP.—We find in the *Medical Times and Gazette* an obituary notice of Dr. Scott, formerly of London, who, with one Jukes, assisted by an ingenious gardener named John Read, in the year 1822, inspired by the death of the Primate of Ireland, (as was supposed from laudanum,) invented the stomach-pump. His health failing, and thus compelling him to give up his lucrative practice, by the advice of his friends he opened an establishment for the sale of mechanical contrivances for medical and surgical purposes, which for a while promised immense success, but finally fell through. At the time of his death, he was resident physician at Woodhall Spa. The simplest contrivance having for its object the mechanical evacuation of the stomach, is that described to his class by the late Prof. J. K. Mitchell, of Jefferson College, Philadelphia. It consisted of two elastic tubes, which are successively passed down the œsophagus to the stomach, both being allowed to remain. A constant stream of water is then poured into the longer tube, which, as soon as it has filled the organ, naturally finds its way out of the shorter. The stomach is thus most effectually washed out, and the process can be continued as long as is considered expedient without hazard to the patient. While, therefore, we appreciate the talents of honest John Read, the gardener, in contriving a “patent pump to be used for medical purposes,” we are inclined to think that had Dr. Scott been left to himself with his “simple tube and india-rubber bottle,” he would have made a better instrument of it.

—A GOOD WORD FOR DOCTORS.—Physicians are so accustomed to seeing themselves ridiculed or found fault with in public prints, that the following, from *Blackwood*, is quite a pleasant surprise: “We delight in doctors, who are the best friends of frail humanity, and the least quarrelsome fellows you can meet with anywhere, except when they wrangle among themselves. No other class of men enjoy life with as keen a relish, or are so indefatigable in their efforts to promote the happiness and welfare of mankind. They are, too—we say it in all seriousness—the most disinterested of mortals; for although disease is their harvest, we find them always true and faithful monitors, warning us against the evil habits that tend to the destruction of health; and if we were wise enough to profit by their maxims, to live rationally, and to avoid all manner of excess, few would be the fees accruing to the successors of Machaon and Podalirius.”

—EDICT AGAINST QUACKERY.—The Royal College of Surgeons in Ireland finds it necessary to protect itself against dishonorable practices on the part of its Licentiates, as indicated by the following from

the *Medical Circular*. "At a recent meeting of the Council the following ordinance was passed: No Fellow or Licentiate of the College shall pretend or profess to cure diseases by the deception called homœopathy, or the practice called mesmerism, or by any other form of quackery; neither shall they, or any of them, seek for business through advertisements, or by any other disreputable method. It is also hereby ordained that no Fellow or Licentiate of the College shall consult with, meet, advise, direct, or assist any person engaged in such deceptions or practices, or in any system or practice considered derogatory or dishonorable by physicians and surgeons." We might infer from this that while here, honest and intelligent men were clearing their skirts of follies and delusions into which they have been led, there, on the contrary, error is gaining ground to such a degree as to make formal enactments against it necessary. Of the expediency of denying consultations to homœopathic practitioners, we have no question whatever. The more respectable and fashionable the quackery, if it be clearly such, the more binding is the requirement upon the physician, founded on love to humanity as well as justice to his fellows, to discountenance it in every possible way. If then, a medical man is called upon to attend a family who employ a quack habitually, he should make the dismissal of the latter the first condition of his attendance.

— GOING TO THE ROOT OF THE MATTER.—Prof. Carnochan has recently removed about two and a half inches of the *second branch* of the *fifth pair*, measuring directly from its point of emergence from the *foramen rotundum*. The disease was *vic douloureux*. The result of the operation was its entire relief. The Professor's theory in these cases, to which he has been led by repeated failures to produce a cure by mere division of the nerve, is, that disease existing anywhere in its course will produce sensations of pain at its extremities, and that even though the connection between the extremities and the diseased root be cut off, the sensations are still referred to the periphery, just as the mutilated soldier still suffers from aching toes at the end of his cork leg. If then, the diseased portion of the branch be left, division or excision of a small portion of the intermediate conductor is of little or no use. The brain has been too well educated to refer the suffering to any point but the sentient loops.

— AMERICAN SURGERY ABROAD.—It gives us sincere pleasure to welcome back again to the active ranks of the profession our distinguished countryman, Dr. Sims. He has had an opportunity, and a deserved one, of establishing in the eyes of scientific men in Europe his right to be considered the originator of a mode of operation which, even in the brief space of time since he first promulgated it,

has been of immense benefit to suffering humanity, and of which the most persistent and unwarrantable efforts have been made to deprive him. His reception in Paris was most gratifying—not only was he called upon to operate before crowded classes in five of the largest hospitals of that city, but the most eminent surgeons confided their private patients to his professional skill. Fourteen cases, only four of which were not *unusually bad*, and fourteen cures! Such is the brief record of his labors in the Capital of the Medical World. We doubt if a similar score had ever been run up there before. “I was certainly very lucky,” says the doctor, modestly. The one of us who has had the most experience will probably be best able to estimate the “luck” at its true value. The *Times*—not the English Blood and Thunder War-sheet, but its more peaceably-inclined namesake on this side the water—recently contained a letter from its special correspondent in Paris, which was almost entirely devoted to the consideration of Dr. Sims’ visit and success. He mentions a case which possesses considerable interest in view of the question of the employment of anæsthetics, which has recently been brought so prominently before the profession in this city.

It was that of a young Countess, whose case had been pronounced hopeless by the leading surgeons, and who was placed under his care by Nélaton. A feature of the operation was her narrow escape from death by chloroform. The method adopted for the restoration was both novel and rational, and we are told that it is now generally followed in similar cases in that city. It consisted in “throwing the head of the patient down, and the feet in the air at an angle of about forty-five degrees. By this manœuvre, the brain and heart, with an increased quantity, receive an increased amount of stimulus, from the blood, and life is preserved until the volatile poison has spent its force, and is dissipated.” The ordinary measures, friction, artificial respiration, and evulsion of the tongue, were also practiced.

—MALAKOFF.—As we have thus been led to mention the *Times*’ correspondent, we may say that “Malakoff,” as any physician would have divined from his intelligent treatment of medical subjects, is an M.D. We made his acquaintance as an active member of the “American Medical Society in Paris” some years since, and have always looked back to it with pleasure. We are happy to see that he has recently been granted a license to practice medicine in the City of Paris, a favor rarely and grudgingly accorded to foreigners by the authorities of that well-regulated, but somewhat French, city. That he will acquire a large and lucrative practice among American residents there, we cannot doubt.



THE AMERICAN MEDICAL MONTHLY.

MARCH, 1862.

ESSAYS, MONOGRAPHS, AND CASES.

Medicine from the Human Body. By C. A. HARTMANN, M.D., of Cleveland, Ohio.

Disgusting as the subject may be, it is undeniably of great importance to every physician to be acquainted with all the human and animal substances used as remedial agents in years gone by; because, as Dr. G. J. Fisher justly observes in the January number of the MONTHLY, many of these absurd things are still in great vogue with the vulgar, as well as with the unscrupulous quack. Particularly in this country, where fragments of many nations find a common home, and consequently, many of the popular errors and ridiculous customs, spread over the older parts of the world, may be found together in a small space, every one of us should try to enrich and perfect his knowledge of the most common domestic remedies, so as to be prepared to meet appropriately the pretensions of a patient's good friends in regard to the value of some loathsome article. Since the introduction of pepsine, urea, and similar products into the national materia medica, it will be interesting, also, to look over the wonderful properties formerly assigned to parts which, perhaps, proved efficacious in many instances on account of the very constituents now exhibited in a separate and purified form. Confining my researches for the present to the human body, I offer the following as a kind of supplement to Dr. Fisher's article "On the Animal Substances employed as Medicines by the Ancients."

1. *Human Blood.* Twenty drops of the patient's own blood, taken internally, for dropsy of the extremities; the ejected blood, mixed with hog's dung and butter, swallowed against hæmoptysis and bleeding of the nose.

The menstrual blood of an immaculate virgin—*sanguis menstruus puellæ immaculatæ*—used externally against podagra, tertian ague, erysipelas, and spots on the face. Dried and taken internally, in amenorrhœa. The patient's own menstrual blood, internally, to stop menorrhagia. The menstrual blood of a married woman against urinary calculi.

Dried human blood was not only considered anti-epileptic, but also applied to ulcers.

2. *Human Fat.*

3. *Human Bones.* The powdered filings from the dried bones of criminals; an internal remedy for worms, colic, and dysentery.

The celebrated *Goddard's drops*, mentioned in the *Pharmacopœia Bateana*, were prepared by distilling human bones.

The powder of burnt human bones was taken internally, as well as used for bathing, in podagra and swelling of the limbs. It also entered a composition known as *Popp's purging powder*.

To drink out of a human skull was considered a remedy for goître. Prepared human skull—*magisterium cranii humani*—is an ingredient of numerous old compounds against epilepsy, vertigo, etc.

A description of the *sympathy balsam* may be found in *Dunglison's Medical Dictionary*. An oil of reputed anti-epileptic power was obtained by distilling powdered human skulls, previously buried in horse-dung, until putrefied.

Under the name of *albadara*, the sesamoid bones of the great-toe were thought to be possessed of extraordinary virtues.

4. *Human Urine.* "Before all other dirt remedies, we praise and recommend this one as the purest of all, and as the most common remedy against almost all diseases and accidents. Surely we can say that the benign God has furnished every man with his perfect medicine in all cases of need, if we only look to the urine. On that account, however, it is not advisable to drink it indiscriminately in all diseases, although it is of excellent effect against most internal as well as external injuries. To enumerate in a few words the cases where it is commonly employed: urine dries up the itch, dissolves swellings, cleans wounds, even poisonous ones, and prevents mortification. Used as an injection, it proves a laxans; mixed with saltpetre, it removes the scales on the head; applied to the pulse, it serves against fever;

dropped into the ears, it cures their ulcerations; applied to the eyes, it removes their redness; used as a wash, it is of splendid service against trembling of the limbs; employed as a gargle, it serves against swelling of the uvula; mixed with ashes, it relieves podagra and many other pains. There is no doubt that many prominent virtues are concealed in the human urine, which a stupid fellow should never expect from it. Mr. Winckelmann, after giving many stories about this urine, feels encouraged to pronounce it a short road to a long life. The *lapis animalis* of Paracelsus, which is made of human urine, cannot enough be extolled, says the renowned Frenchman, Petrus Johannes Faber. Some say, not without probable reasons, gold could be powdered finely by means of phosphorus, which is prepared from putrefied human urine, and this powder is said to be a general medicine for all diseases. The *spiritus urinæ*, and not less the volatile salt obtained from urine, give excellent relief in phthisis of the lungs, short breath, scorbut, dropsy, and innumerable other affections. Besides other statements, we have some evidence of this in *Dr. Hartmann's Spiritus against Epilepsy*, made from urine and spirit of vitriol, which has been found reliable quite often in this as well as in many other diseases."

Such is a summary of the virtues of urine, presented in "K. F. Paullini's Heilsame Dreck-Apotheke," printed in 1714. But the many virtues attributed to this article are not exhausted. It was also prescribed in ulcerations of the throat, affections of the spleen, syphilis, urinary calculi, quartan ague, as a cosmetic and dentifrice; against pains after delivery, running sores, and obstinate eruptions of the head, dysuria, dislocations, dysentery, cancer of the breast, loss of appetite, toothache, colic, jaundice, cardialgia, etc. In many cases preference was given to the patient's own urine; in others they had many discriminations. Boy's urine is mentioned frequently; particularly as a remedy for epilepsy, and almost all affections of the eyes. A young man's urine internally, in dropsy and polysarcia; that of an old man, externally, for podagra; the husband's urine in hard labors; that of a virgin, externally, applied to pterygium and discolored scars; internally, to relieve retention of urine; the urine of a virgin while menstruating, in fomentations to gangrenous parts.

Distinguished from the volatile salt already mentioned, we find the "tartaric matter from the urine vessel," recommended for uterine and calculus pains.

Mercurius microcosmicus is prepared from the residue left after the distillation of putrescent boy's urine, purified and mixed with clay.

The dried globules again distilled over an open fire, furnish the *spiritus salis microcosmici*. Slowly mixed with the product of the first distillation, and the "phlegma" drawn over in an alembic, under certain precautions, this throws down the *mercurius*, which is "a splendid secret for disorders of the chest and lungs, and a magnificent remedy against phthisis; some six grains of it given in wine, or in any appropriate syrup."—(Paullini.)

Among the many preparations containing urine, there was a mixture against headache, an *extractio lunæ anti-epileptica*, a *panacea solaris*, an *oleum luti*, *dolæi cataplasma ad hydrocephalum*, a *glacies animalis*, a tincture and an essence from human urine, and various eye-waters.

5. *Bezoardicum Humanum*. *Urinary Calculi*. Reputed alexipharmic.

6. *Human Excrements*. *Carbo Humanum*. *Zibethum Occidentale*. *Occidental Sulphur*. Still used as a local application to inflammatory swellings. A great remedy for diseases of the female parts of generation, antidote to all sorts of poison, antiphlogistic, tonic, astringent; used against all obstinate ulcers, gangrene, burns, frost-bites, felons, loss of hair, lice, cancer, worms, dyspnœa, jaundice, wasting, sore throat, intermittents. The patient's own excrements particularly against "internal apostema," cancer, dysentery, uterine troubles, tertian ague, the plague; externally, in toothache, condylomata, pains in the arms, erysipelas. The dried excrements of a "healthy male fellow," internally, to cure the plague. The meconium of an infant, dried and powdered, against epilepsy and quartan ague; locally applied to nævus. Children's excrements, smeared over the face in fainting; also used topically for swellings of the knee. The same dried and mixed with herbs, to be smoked in dyspnœa. The excrements of a healthy boy were prescribed in a linctus for angina, and as an ingredient of medicines against dysentery; externally, in applications to sore throat and podagra. Better still for inflammatory affections of the throat, should be the excrements of a boy who had been fed for three days on lupines, bread, and wine.

Burnt to ashes, the excrements of men served internally as a remedy for sore throat; and in "preservative powders, against the plague;" externally, against obscuration of the eyes, cancerous and other obstinate ulcerations, and fistula.

Water distilled from human excrements; specially serviceable in diseases of the eyes, externally, but also for ulcers, erysipelas, itch, herpes, burns, fistula, cancer, bites of mad dogs; given by the mouth against dropsy, stones in the kidneys or bladder, and all kinds of po

soning. Prepared from the dried excrements of a young man, this water was held in great value for epilepsy.

Different "oils" obtained from human dung were employed in cancer, jaundice, ulcers, erysipelas, tinea capitis, pleuritis, podagra.

The long worms born out of human excrements, kept warm, "rolled in sand and then dissolved in alcohol, make an oil with which wasting limbs should be anointed."—(Paullini.)

7. *Mummy*. Besides other uses, ingredient of a syrup and pills against hernia.

8. *Human Ear-Wax*. Believed to possess great power in dissolving pterygium and inflammation of the eyes, but applied also to wounds, rhagades, the bites of vipers and scorpions, corns and burns, and, spread on an eel's skin, to felons. Smoked with tobacco, as an emetic. Internally, to relieve colic and jaundice.

9. *Saliva*. Collected before breakfast, as an application to ulcers, wounds, and sore eyes.

10. *Human Milk*. Principally to eye-waters and ointments; dropped into the ears for pain and inflammation in them; internally, with saffron, against jaundice. Entered also into a cataplasm used against worms.

11. *Mucus from the Nose*. Topically employed in hæmorrhoidal swellings and burns.

12. *Human Hair*. The ashes of it in ointments for promoting the growth of hair.

The patient's own hair, taken in his urine, against jaundice.

The hair from the pubes, burnt, and taken in a man's urine, to render hard labor easy. The ashes and smoke of burning woman's hair, in all uterine troubles.

13. *The After-Birth*. That from a first child, powdered, formed a part of *Wiedeholtz's powder against epilepsy*. Three drops of the blood of human secundines were believed to suppress after-pains.

14. *Sweat*, particularly the patient's own, held to be a good application to inflamed breasts; and, with vegetable fomentations, to goître.

The sweat of a dying person, said to relieve painful hæmorrhoids.

15. *The foam from the mouth of a corpse*, recommended to be drank in beer, against pains after delivery.

16. *Touching with a dead man's hand* was practiced not only with a view to remove goître, but also warts and swellings of any kind.

17. *The dirt from under the toes*, as well as that found in the pantaloon, below the knees, smeared under the nose, should stop bleeding.

18. *Human Parasites*. The modern homœopathic practice of treat-

ing the itch by administering potential doses of the acarus with the scabs, cannot even avail itself of the claim of novelty, for six or seven bed-bugs swallowed, have been a reputed cure for the ague; and in jaundice the advice has not yet died out, to eat from three to six full-grown lice. Another method of application is narrated as follows: "A man had a great tumor on the head. On pressure, it emitted a thin and stinking matter. A woman recommended that a number of lice be put on the tumor, and tightly covered. They bit the man terribly, but besides that they sucked out the whole tumor, and he recovered. A girl of four years had quite big goitres on the neck and near the ears. She was also advised to populate her head with lice. Here and there they perforated the skin, so that the matter could run out, and without any other assistance, the child has been happily cured."—(Paullini.)

We may well feel happy that such prescriptions and such remedies are forever banished from our therapeutical armamentarium; but, humiliating as it is, we can neither deny nor overlook the fact that many of these things are still in daily use as popular or domestic remedies, and on that account they deserve our attention, be it even at the expense of our appetite.

Remarks on the Effects of Frost on the Human Body. By R. NELSON, M.D., of New York.

Read before the Medico-Chirurgical College, of New York.

Last year I read before this Society a paper on Frost and its Effects on the Human Body, which was published in the AMERICAN MEDICAL MONTHLY, for January, 1861. My object in laying that paper before the profession was simply to place the leading facts before the inexperienced, and because I was not aware of a single medical work having a chapter on the subject, with the exception of the romance of Baron Larrey, descriptive of the effects of cold on the retreating army from Moscow. I was aware at the time of reading my paper that it was too brief, and might have been greatly amplified with advantage; but I thought it only necessary to expose the principal facts, and wished to avoid inflicting a long paper on the Society. Since then, there has appeared a notice in the same journal of a prize essay, by M. Krajowski, on the same subject, in which, mixed with some truths, are several assertions at variance with facts, which, I find, have already led some practitioners into erroneous opinions in a criminal case. I shall now proceed to criticise some of M. Kra-

jowski's statements as I find them reported in the journal mentioned, rectify his errors, and refute his gratuitous assertions.

M. K. says: "*By immersing rabbits in liquids cooled down to + 30° Fahr., he arrived at the following conclusions:*" Here, let me ask—what was the liquid? Certainly, it was not water, for that freezes at + 32°; and besides, immersion in a liquid bears no analogy to immersion in air, the medium in which man suffers, and therefore the experiment is inapplicable. He continues: "*Every considerable lowering below + 32° Fahr. leads to inevitable death.*" The fluid could neither be water nor oils, for these are solids and not fluids at + 32°; if the fluid was mercury, its pressure on the peripheral vessels would greatly empty them by compression, and this compression would greatly impede the expansion of the thorax, to say nothing of the rapid conducting power of so dense a fluid as mercury; if it was alcohol, we must take into account its physiological effects on the system. In any case, these *cabinet* experiments bear no analogy to atmospheric cold, in the case of which these inferences are utterly false. Domestic animals are often exposed to cold 30 and 40 degrees below the freezing point with impunity, for many hours, even days. But with man it is very different; his system cannot generate heat sufficient, nor sufficiently fast, to resist a long-continued cold. Again: "*Individuality exerts an important influence, for all rabbits do not lose [generate] the same amount of heat in an equal period of time.*" True, but what of that? a living body is not a simply physical one, constant in its properties; it differs at one time from another greatly in its physiological state. A lawyer, Mr. B., suffering under religious insanity, but otherwise in good health, left his warm bed and house, unobserved, on a cold winter night, the thermometer being at about zero, and barefoot, with only a shirt on his body, traveled a distance of nearly eight miles, when he was met quietly walking along the road. When stopped and taken into a house, to the astonishment of the people, no part of him was found frozen, not even his feet, that had so long trodden the hard, icy road. How much the mental state he was in served him, I know not; but there are those, particularly young doctors, who will readily explain the matter with an ease and lucidity proportionate to their assurance. However, this case scarcely comes under M. Krajowski's "Individuality;" I merely give it to aid him, and as a curious occurrence.

Continuing with his (rabbit) examples, he says: "*The pulse becomes always weaker, as also the heart's impulse.*" Of course, since scarcely any blood reaches the surface and the extremities; the circulation (that is, return of blood,) is principally confined to the viscera, and

even there its temperature gradually lowers, partly from the cold blood that returns from the surface, and the cooling of the blood through the lungs, until the whole mass has been reduced to a very low temperature. This cooling of the blood, even without arresting secretion, is made manifest by the cold gushes of saliva from the parotid duct, when the face has grown very cold. Many observant persons have felt as if the blood in the cava was cold after long and quiet exposure, as in riding long in a cold night. Who has not experienced how long it has taken to warm the hands and wrists after long exposure, by immersing them in warm water? After long exposure to cold, as in driving for several hours, the hands may become bloodless, the fingers being still obedient to the tendons, although frosted; on the return of the blood—warm blood—the pain becomes agonizing; this phenomenon *I* cannot explain; but, as already stated, there are those who can explain everything.

"The freezing of parts, so frequent in man, is rare in animals." True; and if true, how silly it is to make foolish and unnatural experiments on the lower animals, and therefrom deduce conclusions explicative of what occurs in man! *"He never found a frozen part, except the ears of rabbits and the crests of cocks."* I venture to affirm that the ears of *live* rabbits are never frozen. Hares burrow under roots of trees, under snow, in the daytime, and go out to browse at night only; when snared, no ear is found frozen, but shortly after death the whole body becomes a frozen, solid mass, as I have often observed; the same is the case with partridges, quickly after their strangulation. As to the combs of cocks, they freeze readily, and after thawing slough off, as also do their toes, exactly like the toes and fingers of man.

"Animals running about freely can stand great cold without dying, or getting their extremities frozen." This would imply that these exposed animals preserve themselves by considerable exercise; but this is a great error. I derived my experience of the influence of cold on animals in Lower Canada, north of 45°, where all cattle are housed in warm stables during the winter, and I was thus afforded no opportunity to decide this question, which always interested me. But I passed three winters in Vermont, a little south of 45°, where horses only are housed, and badly so; while cattle are left out, night and day, the whole winter. I took this opportunity to notice the effect of what I considered a cruel treatment. There I never observed that cattle *moved about freely*, that is, quickly, as if to keep themselves warm; quite the contrary, the colder the night, the more slowly did

they mope about; but they ate enormously, when they could get at the hay-stack. Still secretion was not arrested, as in the case of the parotid saliva before mentioned. I have more than once seen the cows milked in the morning after a very cold night; the milk being warm, it is true, but much less so than in summer. In cold weather cattle move much more slowly than in mild weather, for this is the constant effect of cold on *all* animals; they do not and cannot exert themselves as in warm weather; even horses travel slower in very cold days, take shorter steps than usual, but as frequent, the extension of the limbs being so much arrested, that in a given time they travel at least one-third less the distance than they would in moderate weather.

The author relates *instances of horses and cows losing their way in woods for months, in a temperature averaging from 8° to 26° Fah., without other food than what they found under the snow. These animals, when found, had become very much emaciated, and had lost nearly all hair, but no part of the body was frozen.* These cows and horses do become lean because of the scarcity of food, but never lose their hair; quite the contrary, for the hair is always scant, short, and sleek in summer; in winter, abundant and long. Hence it is that all summer peltry is greatly inferior in quality and price to that which is procured in winter; the summer buffalo-robbs bring only half the price that those of the late autumn and winter do; and the farther north, and the colder the season, the richer in fur and higher in price are they; the musk-ox and bear-skins of the far north are remarkably superior to those of less cold latitudes; the same is true of all the feline species, martins, minks, raccoons, &c. And among these, by mid-winter, the accumulation of fat is so great, that in raccoons, skunks, &c., muscular fibre has become nearly obliterated by white fat, which disappears in summer, leaving the muscles restored to their natural appearance. This is a healthy transition, although the catchers at novelties call it *fatty degeneration*.

“*The observation of Brambilla, that, under ordinary circumstances, one hour's exposure to great cold was sufficient to cause death, is confirmed by the author's observations in Siberia. In Siberia it is generally taken for granted that persons lightly clad can march with impunity for the first four miles, the thermometer being at 30° to 35° Fah. Persons have stayed with impunity in snow and ice for two, three, even for five or six whole days.*” Partly true; but it must be remembered that walking in snow is exceedingly fatiguing, requiring great exertion, which keeps up the circulation. To submerge in or under the snow, is an excellent

preservative, since snow is a very bad conductor, and suffers the heat of the body, communicated to the clothes, to be preserved, while in the air the abstraction would be rapid and great. As to the short time requisite to freeze a man, (who is vastly inferior as a generator of heat to an inferior animal,) the statement is correct. I have known several deaths so produced in less time than an hour. A young man, (20 years,) in vigorous health, and not badly clad, driving a stage from Laprairie to Montreal, a distance less than nine miles, was frozen to death, stiff and solid. A man 50 years of age sat down in his sleigh to go home; when he arrived, a distance of four miles, he was found frozen stiff; the horse, under no management, had trotted for a time, and then walked slowly until he reached the house; many other individuals I could cite by name. It occasionally happened that a sentinel, on the cape at Quebec, was found by the relief, frozen, dead and stiff; but, I believe, not since 1811, when Col. Brock made appropriate regulations, by shortening the duty from two hours to one, or less, in cold nights, with other protection; such as a sentry-box cloak, and straw for the feet in the sentry-box. As to marching four miles, that can easily be done, and much more, for exercise maintains the heat of the body; but the march soon becomes a slow one, owing to the short steps that the cold induces, until at last the marcher has become fatigued, sits down, and then is cooled so low as to freeze. As to the six whole days, that is a simple flourish of the pen, and untrue.

"A Russian was caught by a snow-storm, and buried with horse and sleigh in it. He was found living and asleep, after twelve days. The horse was dead and frozen. The man easily awoke on being called by name; he had eaten nothing, only quenched his thirst by eating snow from time to time. Some toes and a finger were frozen." (!!!) I have already said that snow is a good non-conductor, but that is not all that is requisite as a preservative of life for *twelve* days; as to quenching thirst by *eating* snow, the statement is simply absurd. A man needs food in much less time than twelve days, to say nothing of water. Krajowski says, he *eat* snow. This M. K. has simply invented to complete his case. To drink snow-water is a very different thing from *eating* snow. Any one of experience knows that eating only a small quantity of snow parches the mouth, renders the saliva glutinous, stringy and adhesive, makes the mucous membrane painful, and greatly increases the thirst; so that, without water to drink, and only snow to eat, a man will die of thirst. Even sheep, cows, and horses will starve for want of water, and will only lick the snow.

M. Krajowski says: "*The anatomical appearance in individuals dy-*

ing from the effects of cold are: 1st. *Rigor mortis* more marked than after any other manner of death. The extremities and the protruding parts, as ears, nose, and toes, are very brittle, and break especially easily on transportation." As to the *rigor mortis*, he ought to have named it *rigor geli*. Of course a frozen body is stiffer than a simply dead one; but a frozen body, after being thawed, has less *rigor mortis* than one never frozen, as we invariably find them in the dissecting-room. As to the nose, ears, toes, &c., being brittle and easily broken during transportation, it is so utterly false, that one is astonished that any man would venture to make such an assertion. Students, after nabbing a frozen body out of the *Caveau*, being pursued, have had to gallop over the hard "cabot" road of Lower Canada, for a long distance, and in no instance out of hundreds have a toe or a finger been snapped off, as M. K. asserts. Who has not seen, year after year, slaughtered frozen sheep and pigs, brought a great distance to market, and no limb, not even the protrusive ear of a pig, snapped off? Who has not seen sleigh-loads of fish, tommy-cods by the thousands, brought over a hundred miles, and yet none broken? although fish, surely, are more brittle than man or mammalia.

"The brain and its membranes are strongly congested, the sinuses filled with blood; extravasation is rarely found; serous effusions are met more frequently." Congestion is a diseased state of a part, but death by freezing is not a diseased action. The sinuses must be always filled with blood, in whatever way the death may have occurred; for such is a physical necessity of fluid in a closed and incompressible box like the skull. The natural amount of water in the ventricles is of course frozen, but such water is not effused, since no *diseased* action has existed to produce it.

The posterior part of the lungs is hyperæmic. True. But this is a simple and necessary fact; for the surface blood gradually recedes as the body cools, before death; and before it freezes, it necessarily accumulates in the warmer visceral cavities, and at last freezes there.

"Bits of ice can often be felt in the subcutaneous veins, and are also found in the cavities of the heart, in the ventricles of the brain, and in the urinary bladder." As to the external veins, since the blood left them before freezing, they can contain, if any, very little material to become ice. The blood in the heart, and that in the visceral veins, freezes of course; and the liquor pericardii becomes a thin case of ice around the heart; a fact that M. K. does not mention, which shows that he has examined, if at all, very superficially, the frozen subject. The pleural and peritoneal liquor is also frozen.

"*The cadaver is pale; after thawing, the liquefied blood passes, by ex-osmose, through the walls of the vessels, causing red stripes to be seen.*" As a certain sign of death by freezing, M. K. regards the "*separation of the coronal and sagittal sutures. Its presence can easily be made out by grasping the skull with both hands, and effecting an approximation and separation of the cranial bones. In FIVE cases this was constantly met with. This phenomenon is analogous to the bursting of bottles, filled with water, exposed to great cold.*" This certain sign of death from freezing is utterly false, although attempted to be bolstered up by reference to five cases. If this ever occurred in Russia, the cold of that country, and the skulls of its people, must differ greatly from most of other parts of the world. This statement is on a par with that of Baron Larrey, who deliberately stated that the eyes were the part that froze first, of the French fugitives from Moscow, in the great Russian retreat; and both assertions are equally false. M. Krajowski's Essay is evidently *pennafactured* at the desk, in the cabinet, and cannot be the result of actual observation out of doors. These writers, deficient in facts, strive to supply them, at the time of writing, by calling to their aid their reminiscence of what they had learned of Physics. Larrey remembers that the aqueous humor is without heat of its own generation, and therefore, like water, is more readily frozen than parts through which circulate heating blood. Krajowski, bolder than Larrey, lets his cat out of the bag by comparing the skull to a glass bottle. Now, the skull is not brittle, inexpandible, like glass or a cast-iron bomb-shell; nor is brain water. Green bones yield in some degree to slow distention. As far as I know, water is the only body that expands on becoming solid. Freezing, it will break a brittle, unyielding glass bottle; but oil—as olive oil, and anis oil—on freezing, will not, because they are not water, and do not expand on becoming solid.

Brain is not water, and is more likely to contract than expand in freezing; and its *integral* water, unlike a mass of unmixed water, is quite likely to find space for its expansion among the cerebral atoms with which it is intimately mixed. Besides that, the freezing of the contents of the skull goes on from without inwardly, and will find room by gradually forcing the liquor arachnoidei towards the base and spinal canal, parts to be last frozen, and thence bulging outwardly the capsular ligaments of each vertebra, thus gaining all the space requisite. The sutures and the bones, each and all, will yield a little outwardly—the sutures without separating, and the bones without cracking.

The foregoing remarks and objections to M. Krajowski are sufficient to refute this faulty part of his essay; but to put the subject beyond doubt, I shall give a few facts, out of many, from my personal experience. For this purpose, I must enter into a short digression, descriptive of the manner in which subjects are procured in Lower Canada during the winter.

For many winters, when I lived in Lower Canada, I carried on dissections largely for a class of students. The subjects were all procured from the burial-grounds, where, in the autumn, a large cellar is dug, called a *Caveau*, and lightly covered over by a shed of boards to keep off the snow. This is done to avoid the great labor and expense of digging separate graves through earth frozen to a depth of several feet. In this receptacle are deposited daily the dead of the poor and such middling class people as cannot afford the expense of separate graves. From November to the end of April, the coffins are piled one on another, and in the spring the whole are covered over with the surrounding earth. Out of these *caveaux* I have received seldom less than twenty bodies in one winter, and the number has more than once exceeded thirty. All are frozen, often before reaching the *caveau*; if not, they soon after freeze, and so continue the whole winter. Of these bodies, we get several at one time, bring them home, and bury them in the snow until wanted. The subject is thence brought into the dissecting-room and suffered to thaw gradually, and then dissected. When this is over, the bones (and heads) are set to macerate for cleaning and to make preparations.

Now, in all these numerous anatomical pursuits in each winter, and for many winters, with bodies thoroughly frozen through and through, hard and solid, some of them having so remained frozen for three and four months, I never once met with a single instance of rupture of the sutures, or crack in any bone of the skull; on the contrary, we habitually made preparations of the heads, and when we wished to prepare a disarticulated skull, we were obliged to have recourse to the old method of separation at the sutures by filling it with dry peas or beans, and causing these to expand by soaking, force the bones apart.

Most prize essays are "cooked-up productions," examined, voted upon, and approved by persons who know little of the subject; and hence it is that very few outlive the day of their publication. As to the "experiments," gravely brought forward to bolster them up, the authors appear to be regardless of the fact that the analogy between inferior animals and man is very remote; the organization of man, and its functioning, being of the highest order, while that of

lower animals is less and less complex as they descend in the scale; so that, what would produce disorder in a complex machine, would affect only in a slight degree a more simple one. M. Krajowski says what is true—man, well clothed, soon perishes in dry cold, and that animals scarcely ever do; and, to explain this fact, he experiments upon rabbits, without additional clothing; and, as if to render the case more preposterous, he immerses them, not in cold, dry air, but in ice-water, or some other liquid. It is of such irrational experiments that a large portion of physiological treatises are composed. It is by experiments upon the nervous and vascular systems of frogs that the wildest theories have been suggested to explain what takes place in the highly complex structure of man. For years past these stupid experiments have been performed to explain innervation and inflammation in the human being, regardless of the fact that the nervous system of the frog is scarcely yet centralized, existing to a great degree in a diffused state; while the imperfect circulation of a cold blood, not essential to life, is seized upon as analogous to that of the vital fluid in man.

Translations from the German. By C. A. HARTMANN, M.D., of Cleveland, Ohio.

I.—*On the Diagnosis of Pigmentary Deposits, particularly in the Renal Vessels.* By Prof. OPPOLZER.

Intermittent fever must be considered pernicious not only in rapidly fatal cases, accompanied by coma, but whenever life is endangered, even after a long time, by subsequent morbid changes. Sometimes death occurs after a few paroxysms, and nothing is found to explain it beyond serous infiltration of the cerebral membranes, acute swelling of the spleen, and hyperæmia of the other organs. In other cases, there are exudative processes, (erysipelas, pleuritis, pneumonia, dysentery, hæmatemesis, hæmaturia,) but only during the paroxysm. The comatose forms exhibit frequently, besides the serous infiltration already mentioned, formation of pigment in the blood, and deposition of the same in the cerebral vessels. This formation takes place either rapidly, resulting, after a few violent paroxysms, in delirium, convulsions, sometimes mania, stertor, coma and death; or the intermittent continues for some time before the same symptoms announce the formation of pigment. Occasionally, this process assumes even a chronic character, and the pigment is then deposited in different organs, whose functions it may disturb, or remain harmless until

the obstruction in the vessels is turned to account by some other influence.

Usually the pigment is undoubtedly formed in the spleen and transferred to the hepatic ramifications of the portal vein, where it is in part detained, while another portion of it passes on to the capillaries of the liver and lungs, and may travel through the whole circulation. It seems, however, as if sometimes the pigment appeared first in the blood itself.

Being once deposited, it causes varying symptoms, even in the same organ, and this renders, with few exceptions, the diagnosis rather difficult. Accumulation of pigment in the integuments is evident from a more or less ash-colored hue of the same. The cerebral symptoms vary with the quantity and duration of the deposit; if extensive and rapid, it is frequently accompanied by typhus or jaundice; where the process is more chronic, it is followed by gradual decrease of the mental faculties, or is borne for some time without injury, until, from some other cause, hyperæmia leads to lateral pressure and extravasation around the obstructed vessels—*apoplexia disseminata*. Here, also, typhoid symptoms are commonly present. Pigmentary deposit in the spinal marrow is of rare occurrence. Hemiplegia is the consequence, and contractions or permanent paralysis from atrophy of the spinal marrow remain, unless the extravasation is absorbed in time, and thus the obstruction removed.

Enlargement of the liver arises, in obstinate intermittents, either from gelatinous infiltration, or from accumulation of pigment. In the latter case, the results are hyperæmia, exudation, and possibly atrophy of the liver, which then exhibits a uniform granular texture and a chocolate color.

Slate-colored spots are occasionally observed, after pernicious intermittent fever, on the mucous membranes of the intestines. The symptoms dependent upon this process are not yet ascertained. In all the cases enumerated, the diagnosis remains uncertain, as the symptoms described belong also to other affections of the suffering organs. More evident is the pigmentary embolia of the renal vessels. It can be diagnosticated many years after all other sequelæ of fever and ague have disappeared. For a long time the secretion of urine may not be disturbed, nor the organism be manifestly affected. Of two cases, the one exhibited, seven years subsequently to an obstinate intermittent, suddenly, cephalalgia, chilliness, weariness, spasmodic pains through the abdomen and lower extremities, followed by typhoid pneumonia and bronchial croup. Urine, resembling the washings of

flesh, albuminous; in the sediment, free granular pigment and pigmentary deposits connected with cylindrical exudations from the Bellinian tubes. Death by suffocation. Liver and spleen enlarged; both kidneys tumefied, with numerous pigmentary accumulations in the Malpighian bodies. In the other instance, intermittent fever had been more or less constant for thirteen years. Hard tumors, without pain, in both hypochondriac regions; skin of a dirty, brownish color; some serous effusion in the abdomen. Urine dark-colored, not albuminous. In three weeks, suddenly, difficult deglutition, angina, dyspnoea, cyanosis; blood, albumen, and pigment in the urine. An antiphlogistic treatment, followed by quinine and iron, finally led to recovery. Here the deposit in the kidneys did not manifest itself until hyperæmia supervened, in consequence of the inflammatory process in the larynx.—(*Wiener Medizinische Wochenschrift*.)

II. *Observations opposed to the Doctrine of Superfætation.*

If in all cases of apparent superfætation, remarks Professor C. R. Braun, of Vienna, the coverings of the ovum had been minutely examined, the number of such cases would be greatly reduced. The placenta of a mature female child, born December 19, 1859, at the Lying-in Hospital of Vienna, shows, besides the normal insertion of the umbilical cord, and more than five inches from it, a large yellow spot, around which another set of umbilical vessels is spread out. This yellow spot is connected with the remains of an umbilical vesicle: a simple chorion and a double amnion; the smaller part of the latter containing a mummified foetus of several months. The arteries of its atrophied cord clearly communicated with those of the other cord. There had evidently been twins, and one of them perished in consequence of some disease of, or injury to, its umbilical cord.

According to Prof. A. Valenta, of Laibach, a woman at the age of thirty was delivered of her second child, November 29, 1859. A loop of the cord around the child's neck the only irregularity. After-birth expelled spontaneously. Placenta oval, eight inches in diameter; its uterine surface normal; marginal insertion of the cord. Not far from the insertion there was a ruptured cyst, containing a brownish-yellow body, an inch and three lines in length, and many pisiform nuclei of a similar color. This cyst proved to be a second amnion, connected with that of the mature child; the body in it was a malformed, flattened embryo of two months and a half, with a distinct cord; the arteries of the latter communicating with those of the former. Chorion simple; placenta divided by a notch. This, also, was a case of

twins: one of them perished from some unknown cause; the other arrived at the full term of uterine life.—(*Zeitschr. der Gesellch. der Ärzte zu Wien.*)

III. *The Abdominal Pouch—Cloaca—in the Female Fœtus.* By Prof. J. F. H. ALBERS, of Bonn.

At one period of fœtal development, the termination of the intestinal canal, the two ureters and the divided uterus open into a common space in the hypogastric region. This space forms a deep depression in the abdominal walls, and is called the pouch or cloaca. According to the time when development is interrupted, it appears under three forms.

1. Before the abdominal walls are formed, the peritoneal sac is the only covering of the intestines. It shows, in the hypogastric region, a shallow depression, with membranous but hard margins. The external surface of this pouch is rough; covered with various masses of areolar tissue; here and there penetrated by numerous vessels. The floor consists of thick, compact tissue, resembling bacon, or a tendinous membrane, and is lined with a villous texture, somewhat like the intestinal mucous membrane. In the upper and right part of the pouch, a large opening leads to an adjoining portion of the intestines, commonly the cœcum; the smaller portion of the intestine runs alongside of this, and is connected with the wall of the pouch, without perforating it. A little lower, another aperture communicates with the ascending colon. The ureters, not fully developed, do not reach the pouch, nor do the two wombs communicate with it. The pubic bones do not meet, and frequently the sternum remains divided.

2. Abdominal walls firm and dense, with muscular layers; instead of the skin, a reddish, succulent, serous membrane. Pouch large, round; very marked, with more holes. From a large one in the upper and right part, or more in the middle, an everted part of the small intestine, with the provisory anus, protrudes, often to a length of one or two inches. Another opening by the side of the former leads to a small bag not connected with the bowels; a third one, more to the left and inferiorly, belongs to what can be considered as the ascending colon. The upper division of the pouch, which contains all these openings, appears therefrom to be a part of the future cœcum. In the lateral margin, or externally to it, the ureters are lost in a fold of the integument, either opening there, or still remaining obliterated. Each womb has now an incomplete vagina; each of them opening, if at all, on one side of the pouch. There are indications of a double clitoris

between them. The vessels of the perineal and hypogastric regions are yet deficient; portions of the small intestines, the descending colon, rectum and anus, entirely wanting.

3. Pouch surrounded by normal skin; the double clitoris distinct in all its parts; anus indicated by a depression. The pouch presents seven apertures: a small one, most externally on either side, for the ureters; next, two larger ones, for the vaginal canals; the other three more superiorly, and to the right. Of these, one leads into the still incomplete and blind ileum, the second to a well-marked vermiform process, and the third to the partly developed and blind ascending colon. The floor of the pouch is now divided into several departments, running towards the different orifices, and corresponding in structure to the parts these lead into: one exhibiting transverse folds like the vagina, another intestinal mucous membrane, etc. By folding the pouch laterally, the intestinal canal, vagina, and urinary bladder appear in their proper relative position. The hypogastric artery is still wanting, or merely indicated by some small ramifications.

This explains many abnormal formations of the female parts of generation, such as the congenital atresia of the vagina and anus, malformed hymen, etc.—(*Monatsschr. f. Geburtsk. und Frauenkrankh.*)

Transactions of the Medical Society of the County of Kings.

APRIL, 1861.

Dr. CHAPMAN made some remarks respecting diphtheria. He thinks it a blood disease, the poison of which may be eliminated in health—the throat trouble being but a symptom of general constitutional disturbance.

He commenced the treatment of the disease with mercurials, and locally, with caustic; but his experience had convinced him that these remedies are injurious, and he now relied entirely upon brandy and quinine, and upon simple gargles.

Brandy, he thinks, acts not only to strengthen the system, so that the poison may be eliminated, but the alcohol increases the plasticity of the blood, while the tendency of the disease is to disorganize the blood and allow the albumen to form the membrane.

Dr. CHAPMAN thinks the condition of the throat is not that of inflammation, but is merely congestion, a stasis in the capillaries.

Dr. HALLETT relies upon the internal use of stimulants and quinine,

and iron. Locally, he uses caustic, gr. lx. to ʒj., and dates the improvement of cases from its application.

Dr. CONKLING alluded to a case of diphtheria in which there was a most disgusting fœtor to the breath. The bromide of iodine was used (four drops to the ounce of syrup of gum) locally, with decided success—the free iodine which is constantly being liberated acting as a disinfectant.

Dr. BALL finds no difficulty in discriminating at once between diphtheria and other diseases. He regards it as a dyscrasia of the blood, in which it has too much plasticity. Hence he relies upon anti-plastics, the best of which he thinks is mercury. He first evacuates the bowels, giving for a day or two mercury and nitrate of potash. When the secretions of the bowels and kidneys are normal, he combines them with Dover's powder, as a sedative, subsequently giving quinine and wine, or brandy. Does not use caustic locally.

Dr. BALL stated that he had treated in this manner from sixty to seventy cases of diphtheria, without losing a case.

Dr. HART had seen no extreme cases. He adopts the gentle mercurial treatment at the beginning, and then gives stimulants freely. He does not use the probang, but has found immense benefit from a gargle made of ten or fifteen grains of nitrate of silver to a tumbler of water.

Dr. CONKLING presented a portion of the ilium in which Peyer's glands were extensively ulcerated, in a case of typhoid fever, and read the following history:

*A Case of Typhoid Fever terminating fatally on the Twenty-first Day,
by Hæmorrhage from the Bowels.*

Mr. H., aged 21, of nervous temperament and rather feeble organization, became slightly unwell about the first of January last. Confinement to the house and the usual domestic remedies were resorted to, and medical advice was not sought until Tuesday, January 8th.

He had then some fever, which assumed at first the remittent form. A diaphoretic mixture was ordered, and between the slightly marked exacerbations one grain of quinine was given every four hours.

The disease on the 12th had assumed the form of uncomplicated typhoid fever—severe headache, eye heavy, tongue thickly coated and fissured, and subsequently peeling off in flakes, rose-colored eruption on the abdomen and chest.

The tongue cleaned from the middle on the 14th day, and on the 15th he had a profuse discharge of blood from his bowels, which

ceased to flow after the administration of gallic acid, subsequently passing healthy fæcal matter.

Quinine, brandy, and beef-tea were the principal remedies employed. The disease seemed to be progressing favorably, and at 11 o'clock P. M. of the 20th day, he was very comfortable; pulse 80; tongue moist, and nearly clean; and perfectly rational.

He slept the most of the night quietly. At 8 o'clock on the morning of the 21st day, had a recurrence of the hæmorrhage. Acetate of lead and opium were given, and an injection into the rectum of a solution of Squibb's persulphate of iron administered, but he continued to lose large quantities of blood, and at 2 P. M. died, with all the symptoms of a man who had been bled to death.

Post-mortem twenty-two hours after death. Abdomen only examined. Stomach, liver, and kidneys healthy. The spleen was nearly three times its usual size, and its parenchyma reduced to a soft pulpy mass. The ileum, cœcum, and portions of ascending colon intensely congested—Peyer's glands ulcerated, and in many places entirely through to the peritoneum.

The vessels were enlarged and ulcerated into, thus indicating the source of the hæmorrhage.

The feature of marked interest in this case is, the fatal result occurring so suddenly, when every symptom seemed favorable to recovery. There had been no tenderness over any portion of the abdomen—an entire absence of pain, tympanitis, and diarrhœa; the administration of no cathartic or laxative medicines; healthy fæcal matter had been repeatedly voided between the first attack of hæmorrhage and its recurrence; the tongue assuming a natural appearance, and strength sufficient to turn and raise himself in bed.

Hæmorrhage from the bowels occurred in one-tenth of the cases treated in the Massachusetts General Hospital. In 7 out of 21 fatal cases observed by Dr. Jenner, one man passed blood on the 8th, 9th, and 10th days; then the passages were free from blood until the 28th to the 32d, when he died. In one patient, blood was passed every day from the 14th to 21st, patient dying on the 25th. Dr. Flint met with hæmorrhage in 3 cases out of 73. Two recovered and one died. In 53 cases reported by Dr. Mattingly, of Bardstown, Kentucky, hæmorrhage occurred in 9, but in none of the above cases is it noticed as the immediate cause of death.

Dr. Tweedie, in his lectures on fever, delivered in London, in 1858 and '59, and published in the *Lancet*, says: "I had a case some time ago in which hæmorrhage appeared to be the destroying cause, and

on opening the body, Peyer's patches were found to be sound, but the mucous membrane of the lower portion of the ileum, cæcum, and commencement of the colon, exhibited a red, swollen appearance." He further adds, "that the quantity may vary from an amount which only indicates the tendency to hæmorrhage, to 12 or 16 ounces discharged at a single time. The total amount, however, can only be judged by its influence on the patient's strength, which is seriously and often fatally impaired by the loss." "The source of the blood may be traced," he says, "to the ileum and cæcum, and to issue both from the ulcerated patches and intervening mucous membrane."

In one case, Dr. Jenner found after death that water thrown into the superior mesenteric artery poured forth freely from the edges of an ulcer, from which, doubtless, the hæmorrhage, which was the immediate cause of death, proceeded.

The history of the case reported this evening, with the unmistakable revelations made at the post-mortem, shows the uncertainty that must always attach to cases convalescing from a disease in which a slow but certain progress may be making by these ulcerations towards a fatal result.

Some months since I was called in the night to visit a man who was said to be dying. I found him greatly exhausted by the loss of blood from his bowels. He died in a few hours. He had had typhoid fever, was slowly convalescing, had taken some exercise in the open air the day before, and retired with an increased amount of strength. Had there been a post-mortem, there would have doubtless been found an ileum very similar to that of the case now presented.

Dr. Jenner, of London, in an analysis of many cases of ulceration, has the following among his conclusions:

That ulcers dependent for their origin upon the presence in the system of fever-poison may, after the fever has run its course, continue to spread, retard recovery, and even cause death by perforation; and that, while some of the ulcers are undergoing the healing process, others may be spreading.

Rokitansky remarks, these ulcers are a frequent cause of the lengthened duration of illness.

As no treatment during the progress of the fever can prevent or control these ulcerations of Peyer's glands, it is very doubtful if any medication can at all influence the hæmorrhage after it has commenced.

Headland, in his "Essay on the Action of Medicines," remarks that astringents act directly, and especially on muscular fibre. This

contraction is slower and more durable in involuntary than in voluntary muscular fibre. In small doses, astringents constrict and stimulate those tubes that contain in their coats the unstriated fibre; by the same action on the extreme vessels, they prevent hæmorrhage. He says that sulphuric acid is of no use in cases of hæmorrhage, except from the mucous surfaces; hence Huss, of Stockholm, relies entirely upon it in cases of hæmorrhage in typhoid fever.

Dr. Bartlett relies upon the free use of acetate of lead and opium in hæmorrhage in typhoid fever.

Chomel recommends in hæmorrhage attending typhoid fever, iced water and iced lemonade for drink, and the administration of the extract of rhatany.

Dr. HART was recently called to visit a very nervous woman, whose complaint was, that she "felt bloated."

Upon examination, he found the arms, breast, body, and lower limbs to the knees, very much enlarged, and felt like fat. There was no dropsical effusion, no pitting upon pressure, no albumen in the urine. The action of the kidneys was nearly suspended, making but a few drops at a time, and during the twenty-four hours about half an ounce.

He supposed it a case of Bright's disease. He gave blue mass, in six-grain doses, oxide of zinc, and nitrate of potash, and subsequently, tincture of iron. The quantity of urine increased, and is now 24 to 30 ounces. The bloating has disappeared from the arms and breast, and is softening over the body. If the blue mass is stopped, the urine is diminished at once.

Dr. HART's opinion now is, that it is merely an abnormal deposit of adipose tissue.

Dr. HAWLEY gave a verbal report of a case, substantially as follows: March 3d, a boy 9 years of age, intelligent, and rather precocious, was brought to him with the complaint, that for the last three weeks he had been debilitated and disposed to lie down; complained of being tired; would play, but appeared feeble and wearied at the least exertion. From close questioning, it was found that he had periodical quotidian attacks, as follows: chills, pain in back, head, &c., followed with fever. Prescribed quinia—10 grs. per day, for two days, which was taken without relief; then gave a cathartic of calomel, and repeated the quinia in the same doses, after which, the only improvement was a change from a quotidian to a tertian type of the periodical attacks; then gave "Fowler's Sol.," four drops per day, which was continued five days before the patient returned. Was then

informed that the patient had been continually growing worse since last interview; constitutional effect of the arsenic slightly developed; the ague symptoms had now given place to irregular convulsive attacks, with pain in region of stomach, &c.

The patient having stayed away and taken the arsenical solution longer than intended, the Doctor stated that he feared that might be the cause of the present symptoms, for which he gave an opiate, with apparent good effect, controlling the symptoms entirely. But very soon he received word that the patient had been seized with a paralytic attack; he could not walk, yet he could move a little, but was feeble and prostrated. In a short time his strength returned fully, and he appeared perfectly well. Then, again, he would be seized with the paralytic symptoms, with great giddiness and singular perversion of vision, as seeing objects in the wrong place, &c., and recover as before, *suddenly*. He continued in this changeable condition for several days, during which time, Dr. Hawley says: I gave strychnia and iron, and gave a history of the case to Dr. Austin Flint, who concurred in the propriety of the treatment; but it seeming to be doing no good, I had made arrangements for Dr. Flint to see the case with me, when the patient seemed so much better that it was considered unnecessary. He now remained apparently perfectly well for three days, and I was congratulating myself upon the result, when the paralytic attacks returned. *Now*, from the fact of the child's having had a ravenous appetite after these attacks in all their forms, I am giving santolin.

Dr. NORTH gave a brief account of a case of apparent epileptic convulsions in a boy 9 years of age, which had lasted some three years, the child becoming partially idiotic, which is undoubtedly the result of masturbation; as it is discovered that the boy uses every means possible to irritate and excite his sexual organs.

Dr. HAWLEY had known of a similar case, in which the patient was a little girl.

Dr. SQUIBB (the subject of the use of the persulphate of iron for internal hæmorrhages being under discussion—see Dr. Conkling's case of typhoid fever) said that he had had a case of a child, poisoned by the internal administration of the liquor ferri persulph. The mother had administered the iron by mistake for ipecac, giving it in tea-spoonful doses. The child vomited, and threw considerable off. The child died with symptoms of congestion of the lungs. There was probably so much increase in the plastic element of the blood that it would not pass through the capillaries of the lungs. That the

liquor ferri persulph. was a valuable remedy in internal hæmorrhages Dr. SQUIBB had no doubt.

Dr. CONKLING had administered the persulphate of iron in hæmorrhage from the lungs, with the most satisfactory results.

Dr. MINOR thought the persulphate of iron, when administered internally, had a double action—both tonic and styptic.

Dr. CHAPMAN detailed a case where hæmorrhage from the lungs had continued in spite of all remedies, and yielded readily to the internal administration of the persulphate of iron.

Dr. J. G. JOHNSON reported a case of *Rupture of the Tendon of the Quadriceps Extensor Muscle, above the Patella*. The patient had continued about his work from the time of the receipt of the injury, without medical advice. He applied at the Long Island College Hospital for advice for stiffness of the knee. At this time, three and a half months after the injury, the following was the condition of the articulation: The ligamentum patella was perfect. The patella was somewhat lower than the other, and firmly held in place by adhesions, so that scarcely any lateral motion could be effected. The quadriceps tendon had formed new attachments to the skin, 17 lines above the patella. The finger could be carried under the upper edge of the patella in the same manner as it can under the acromion in dislocations of the shoulder. The depression above the patella, at the point where the rupture had occurred, was marked. The man could walk upon a level surface with no appreciable halt, but could not walk up and down stairs with facility. The injury had been produced by a fall from a board, which inclined from a hay-mow to the floor.

Dr. MINOR related a case of rupture of the sartorius muscle in a young man, while exercising in the gymnasium. He was boxing a suspended bag. He threw himself sideways towards the bag with his whole weight, when he felt something give way, and fell, unable to rise. Pain along the course of the sartorius muscle, and swelling with retraction of the muscle, left no doubt as to the injury; complete recovery ensued, with perfect use of the limb.

Dr. J. G. JOHNSON also reported a case of rupture of the gracilis, and probably some portion of the gastrocnemius. The patient was an elderly gentleman. One evening he attempted to remove his boot by pressing the heel of the boot against the toe of the other. The boot was difficult to remove, when a sudden wrench was given, and something was heard to snap, and he was powerless to walk. Swelling and pain along the junction of the tendo achillis and gastrocne-

mius revealed the point of injury. He recovered perfect use of the limb.

Dr. JOHNSON also reported a case, a girl of five years, where necrosis of nearly all of the left half of the inferior maxilla followed the removal of a tooth by a dentist. The necrosed portion of the jaw, including both coronoid and coracoid processes, were removed, and new bone was formed, with complete use of the jaw.

QUARTERLY REPORTS ON MEDICAL PROGRESS.

QUARTERLY REPORT ON SURGERY.

By J. J. HULL, M.D.

1. *Osteo-Plastic Resection of the Upper Jaw.* By Professor LANGENBECK. (London Medical Times and Gazette, September 7th, 1861.)
2. *Amputations, with Preservation of the Periosteum to cover the Sawn Ends of the Bones.* By Dr. J. F. HEYFELDER. (Medical Circular and General Medical Advertiser, October 2d, 1861.)
3. *A New Rhino-Plastic Operation.* By Prof. E. S. COOPER, M.D. (San Francisco Medical Press, July, 1861.)
4. *Notes of Cases in Surgery.* By FREDERICK C. SKEY, F.R.S. (London Lancet, December, 1861.)
5. *A Case of Lumbar Hernia.* Reported by Dr. CHAPPLAIN. (Archives de Médecine, December, 1861.)
6. *Rupture of Posterior Tibial Artery.* Reported by Dr. C. BLACK. (London Lancet, December, 1861.)
7. *Treatment of Fractures by Plaster of Paris Splints.* By Dr. JAMES L. LITTLE. (American Medical Times, December 7th, 1861.)
8. *The Relation of the Insertion of the Capsule of the Hip-Joint to Intra-Capsular Fracture.* By Dr. GEORGE K. SMITH. (American Medical Times, December 14th, 1861.)
9. *A New Operation for the Radical Cure of Umbilical Hernia.* By Mr. BARWELL. (London Lancet, January, 1862.)
10. *Cystotomy without a Stone.* Reported by T. PAGET. (British Medical Journal.)
11. *Artificial Anus in the Lumbar Region.* (Bulletin de Théraputique, October 30, 1861.)
12. *Acute Ostitis, resulting in the Separation of the Shaft of the Tibia from its Head within Three Weeks.* By Prof. J. W. HAMILTON, M.D. (Ohio Medical and Surgical Journal, January, 1862.)

1. "The patient, a boy, aged 15, had always been healthy until two years ago, when he perceived a want of air in the left nostril, which soon became perfectly impermeable, the voice being changed at

the same time. About seven weeks ago the left cheek and the eye began to protrude, and the latter, although otherwise healthy, was no longer used for seeing. No tumor was visible from the nostril, nor from the mouth, while in the middle of the left palatine process of the upper jaw, the floor of the cavity of the nose appeared to be pressed towards the cavity of the mouth, and this part felt soft and elastic, on account of the dislodgment of the palatine bone. Behind the soft palate a firm, lobular tumor could be felt in the left choana, which was quite filled up by it, the introitus into the left side of the nose being blocked up. This latter space appeared to be considerably enlarged, while the right choana and nostril were narrowed. The osseous septum narium was dislodged towards the right side. The teeth in the left upper jaw were quite healthy, and fast. The slight prominence of the left cheek was caused by a tumor between the masseter muscle and the upper jaw. The left zygomatic arch was a little more prominent, and the lower part of the left fossa temporalis fuller than is commonly the case. Nothing morbid could be discovered in the orbit.

“Other surgeons who had seen this patient contended that it was a case of naso-pharyngeal polypus; but Professor Langenbeck argued against this opinion, that all tumors which are not cancerous, as, for instance, the polypi, grow in that direction in which the least resistance is offered by surrounding parts; and that therefore, a naso-pharyngeal polypus would grow into the sinus frontalis, sphenoidalis, and maxillaris, and the labyrinth of the ethmoid bone, and might distend the walls of those cavities, but that it could not grow from the naso-pharyngeal cavity into the fossa pterygo-palatina, and round the upper jaw forward. Others thought that a tumor in Highmor's cavity existed; but to this M. Langenbeck objected, that the walls of that cavity were nowhere projecting, but on the contrary, its external wall was decidedly flattened. He therefore, before performing the operation, mentioned that the case was one of a fibroid of the fossa pterygo-palatina, which had grown from there through the foramen sphenopalatinum into the naso-pharyngeal cavity, the fossa sphenomaxillaris, and round the upper jaw between its external wall and the masseter muscle towards the mucous membrane of the cheek. He also said that the resection of the zygomatic arch, which he had done in a previous case, was sufficient for the extirpation of tumors which grew from the fossa pterygo-palatina into the fossa sphenomaxillaris and temporalis; but that, in this patient, in whom the tumor had penetrated from the fossa pterygo-palatina into the naso-pharyngeal cavity, the

resection of the entire left of the upper jaw was absolutely necessary. In order to avoid mutilation of the face, he intended trying to replace the upper jaw after the removal of the growth.

“The operation was done on July 1, the patient being under the influence of chloroform. Two incisions were then made through the skin; the lower one of these from the place of insertion of the left ala nasi in the cheek, and through this towards the lower edge of the zygomatic arch, and along this bone to the middle of the zygomatic process of the temporal bone. The upper incision proceeded from the nasal process of the frontal bone along the lower edge of the orbit, and beyond the frontal process of the upper jaw to the middle of the zygomatic process of the temporal bone, where it met the lower incision in an obtuse angle. Without separating the skin from the soft parts below it, the operator then penetrated through the lower incision towards the jaw, cut through its periosteum, and separated the masseter muscle from the lower edge of the zygomatic bone. After the fascia buccalis, which was strongly prominent, had been cut through, a lobular, white, shining tumor became visible, which extended between the external surface of the upper jaw, and the coronoid process of the lower jaw, towards the fossa speno-maxillaris, backward. After the lower jaw had been separated from the upper one by means of a speculum, the tumor could without difficulty be removed from the upper jaw, and the left forefinger, proceeding between the upper jaw and the tumor, could reach the fossa pterygo-palatina. As the upper jaw had been compressed by the tumor, and the fossæ speno-maxillaris and pterygo-palatina were considerably enlarged, a slight pressure was now sufficient to allow the introduction of a fine elevatorium into the pharyngeal cavity. A fine and narrow saw was then introduced from without into the pharyngeal cavity, through the fossa pterygo-palatina and the foramen speno-palatinum; and the operator sawed through the whole upper jaw, from behind forward, with a horizontal cut, while the left forefinger, which had been introduced into the pharyngeal cavity from the mouth, caught the point of the saw, and prevented its touching the septum narium. The second incision through the skin was then likewise made down to the bone; the operator penetrated into the orbit, and cut the soft parts in the angle between the frontal and temporal processes of the zygomatic bone. The second cut of the saw went from below upward through the zygomatic process of the temporal bone, and through the orbital process of the upper jaw to the lachrymal bone. The resected jaw was now only connected with

the left lachrymal bone and the nasal process of the frontal bone, by means of its nasal process, which had not been divided; and in this part the skin had also been left entire, to allow nutrition to go on. Neither were the hard palate and the alveolar process of the jaw touched. The jaw was now raised by means of an elevator, introduced below the zygomatic bone. This was done without any difficulty, the jaw moving easily in the connection with the left nasal bone and the nasal process of the temporal bone, as if it were in a joint, and was raised like the lid of a snuff-box, so that the zygomatic bone was nearly on the median line of the face; and the fossæ speno-maxillaris and pterygo-palatina, and the naso-pharyngeal cavity, had thus become easily accessible. The peduncle of the tumor was now seen to be attached in the fossa pterygo-palatina, proceeding from there towards each side; it was as large as a fowl's egg, and one part filled the naso-pharyngeal cavity; the other, the fossa speno-maxillaris. The antrum Highmori, which had been opened by the horizontal cut of the saw at its inferior point, was empty, and quite normal, although somewhat narrowed by the pressure of the tumor from behind and without. The peduncle of the tumor was then separated by means of a broad elevator from the fossa pterygo-palatina; the part, which was in the cavity of the pharynx, was then caught with a strong polypus-forceps, and drawn out. The foramen speno-palatinum and the fossa pterygo-palatina were enlarged to three times their normal size. The tumor was then entirely removed; and nowhere could a perforation of the basis cranii be discovered.

"The hæmorrhage during the operation was very considerable, on account of the dilatation of the arteries; but at the end it ceased spontaneously. Only the arteria speno-palatina was tied, at its entrance in the foramen speno-palatinum, and the ligature conducted through the left nostril. After the wound had been most carefully cleaned, and the operator had again satisfied himself that nothing was left behind, the jaw was again pressed backward into its normal position, and the places where it had been sawed brought into contact. The jaw showed a disposition to swing upward to the nose, so that a slight pressure had to be exercised upon it before the wound was entirely united by means of iron sutures. Some cerate and a thick layer of charpie were then placed upon the wound, and fixed by a bandage. The operation had lasted nearly an hour. Much chloroform had been used, and the little patient had shown some excitement during the intervals of insensibility.

"The further course of this case was very satisfactory. There was

at first some fever and suppuration; but in little more than a fortnight the wound was quite healed. The appearance of the face was then nearly normal. The upper gum had quite regained its usual position, and there was no swelling of the soft parts; only the conjunctiva palpebrarum was a little puffed, but the eye did no longer protrude. There was imperfect palsy of the orbicularis muscle, and the eyelids could not be quite closed. Besides, the infra-orbital nerve and the ganglion sphenopalatinum had been destroyed by the operation, so that there is, of course, anæsthesia of the parts animated by them. In all other respects it was a perfect cure; and it appears, therefore, that henceforward it is no longer allowed to remove the upper jaw in cases of this kind. We may well congratulate M. Langenbeck for having successfully completed—not only a novel operation of importance—but one of the nicest and most difficult on record.”

2. “The experience of M. Flourens on the development of the bones and functions of the periosteum, as well as the observations of Messrs. Ollier, Demarquay, Langenbeck, &c., on the success of subperiosteal resections, gave rise to the idea of making use of the periosteum to cover the ends of bones after amputation; an idea which has been here put in practice by myself and by Dr. Symbolid, at the Workman’s Hospital, and also at the Chief Military Hospital at St. Petersburg.

“The following are some of the facts observed:

“CASE 1.—The 28th March, 1860, J. F., aged thirty-four, underwent amputation of the right leg, the tibio-tarsal articulation of which was carious.

“The removal of the member was effected by the antero-posterior flap operation.

“The periosteum of the anterior part of the tibia was preserved to the extent of two inches. First making an incision, it was then carefully detached from the bone by means of the back of the knife, and served to cover the sawn end of the tibia.

“At the first dressing, which took place forty-eight hours after the operation, we found the greater part of the wound already united.

“On the 15th of April the ligatures came away; and on the 24th the linear cicatrization was complete, and we looked upon the patient as quite cured.

“CASE 2.—J. M., twenty-six years of age, who, a year and a half previously, had undergone amputation of the left arm, and resection of the right metacarpal bone of the right hand for caries, was again

operated upon for the same disease on the 29th of April, 1860, the tibio-tarsal articulation of the right ankle being the seat of the disease. It was removed in the manner described in the first case, only the periosteum was not only preserved on the tibia, but also on the fibula, which it afterwards covered.

"On the 11th of May the ligatures came away; and on the 22d the linear cicatrization of the wound was complete.

"CASE 3.—On the 6th of May, 1860, F. K., thirty-nine years of age, of delicate constitution, underwent amputation of the left leg, for caries of the tibio-tarsal articulation. Its removal was effected by the antero-posterior flap method, preserving the periosteum of the two bones for the purpose of covering their extremities.

"At the end of the month union and linear cicatrization were complete.

"At the Workman's Hospital nine operations were performed in the same manner, with preservation of the periosteum; namely, three of the forearm, two of the thigh, and four of the leg.

"Of these nine cases, two died of pyæmia, (one had the thigh amputated, the other the leg,) whilst the seven others recovered in the space of from four to six weeks.

"CASE 4.—A short time ago, a clerk employed at the railroad had the second and third phalanges of the index finger of the right hand crushed, and the following day he underwent amputation in the middle of the first phalanx, with preservation of the periosteum, by means of the double-flap method. The edges of the wound were united, as in the other cases, by adhesive straps, and the cure was complete in fifteen days.

"What strikes us in these cases, is the rapid cure of the greater number of the patients, particularly at the principal Military Hospital, which, in every respect, may be considered one of the best in Europe. The sooner a patient is cured, the less we need fear that purulent infection, which in our country, as everywhere else, carries off many of those operated upon.

"Amputation by the circular method does not prevent preservation of the periosteum, although by the flap operation the periosteum is more easily retained in the position in which it is placed after the operation.

"It is difficult to detach the periosteum when in a healthy state, and, as we have proved, it is not always done without laceration. To avoid this inconvenience, we commence by first making a semi-circular incision in the periosteum, and then detaching it from the

bone by means of a scraper. However, we can affirm that a slight laceration of the periosteum does not prevent its application over the bone, and the cure is not in any way impeded."

3. "We have had several cases recently, in which we practiced, with entire success, the method of introducing thin arched plates of virgin silver into the soft tissues, to hold them up when the bones of the nose had been lost. Thus far, they bid fair to succeed admirably, as there is every prospect that these plates will become encysted, in most cases, though time enough has not been given to test the method in this respect. There is one advantage this plan has over that of transplantation, viz., that it entails no additional deformity, even should it fail entirely in relieving the one for which it is tried, and we believe that in all cases it may be rendered beneficial, where bone structure alone has been lost. We have a case under treatment now, in which a considerable part of the ossa nasi, the vomer, and a fragment of the superior maxilla were lost—so much so, that the major part of the tissues representing the nose rested entirely below the surrounding surface. A more disagreeable deformity of the organ could not possibly occur."

In this case the integuments were raised and dissected each way for nearly two inches, and the two arched plates of silver, shaped like the ossa nasi, were introduced, and the integuments brought over them, so that the nose at once assumed the natural shape of one pretty well formed, which it retains still, six weeks after the operation.

4. M. Skey gives an interesting sketch of three months' service at St. Bartholomew's Hospital, from which the following extracts are selected:

He regards with much favor the operation of *Lithotrity*, and thinks there are comparatively few cases of calculus in which it is not available. The following cases are given:

"A man, aged 68, admitted in November last, had suffered from symptoms of stone for three years, during which he had passed about 100 small stones, varying in size from that of a large shot to that of a pea. I broke the stone by eight several operations, each of which was unproductive of serious pain, and was followed by more or less relief. A small fragment only remained in the bladder. After the last operation, which was not characterized by any remarkable feature, he had rigors, vesical pain, and low fever, and he died. The post-mortem examination revealed disease of long standing in both kidneys.

"A boy, aged 15, admitted in October, had had symptoms of stone for two years. I crushed the calculus, which I presumed to be about the size of a large almond, twice only, at an interval of ten days. The boy left the hospital well.

"A boy, aged 10, admitted in January, had suffered from symptoms of stone for three years, during which he is reported to have had several attacks of retention of urine. His urethra being large, and readily dilatable, I decided on treatment by lithotrity, and for which I had a small lithotrite made. The stone was crushed twice, without pain. On the following morning a fragment of stone became impacted in the urethra, and retention supervened. No alternative remained but lithotomy. As I was unable to pass a staff in the bladder, I cut down on the urethra without it, and having removed two large fragments of stone from the canal, I opened the bladder by the aid of a staff, and expelled the residue of the calculus by injection. More than half the stone had lodged in the urethra. The boy recovered. I freely confess the attempt to remove a stone from the bladder of a boy ten years of age, by lithotrity, to have been an error in judgment. The first fragment that escaped was of considerable size, and at once blocked up the canal. The rule I have constantly adopted for my own guidance is, never to operate with the lithotrite unless the urethra will admit a catheter of the size of No. 9 or 10. In this patient's case the lithotrite was No. 6, though the urethra was dilatable to about No. 7, or perhaps 8.

"A man, aged 72, was admitted in May, from whom I had removed a stone by lithotrity in 1851. The peculiarities of this case were connected with the physical qualities of the stone itself, from which arose a very protracted term of treatment. I operated on him no less than seventeen times; and I may remark, after some considerable experience of the operation of lithotrity, that the hardest calculi I have ever broken have consisted of lithic acid, and not of oxalate of lime. I never once *crushed* this patient's stone; I only broke it into small fragments. No part of it was ever reduced to powder, as in other examples; but the entire stone, when finally collected, consisted of a multitude of fragments of nearly equal magnitude—about that of a large shot. The force of the screw required to break the stone continued very great up to nearly the last operation. On several occasions I came to apparently a dead-lock, and it required all the power at my command to screw the instrument home. Notwithstanding this force, at the termination of the case the blades of the lithotrite did not indicate more than a very slight strain in the work-

manship, so perfect is the material of which these instruments are constructed."

Mr. Skey advocates the stimulating treatment of *Burns* first suggested by Dr. Kentish. He thus speaks of five cases admitted into the hospital with severe burns on the face, head, chest, and arms: "One died immediately after his arrival. My house-surgeon, Mr. Richard Smith, was at the time ill, and the immediate charge of these cases devolved on a colleague, who applied the oil and lime-water to the arms and hands of each of the surviving men. At that moment Mr. Smith arrived, and completed the dressing by the application of a solution of nitrate of silver (ten or twelve grains to the ounce of water) to the face, neck, &c. I did not see these men till the following morning, when all four complained of severe burning pain in the arms and hands; but stated they were free from pain in the other affected parts. The stimulating solution above mentioned was applied to the upper extremities, and the relief at the expiration of about a quarter of an hour was complete. In two of the cases some pain returned on the third day, and relief was obtained by the same means. My directions are simply these: In the case of infants or young children, wash the affected surface, if not very extensive, with a solution of nitrate of silver, in strength six or eight grains to the ounce, and immediately cover up the part with a thick mass of cotton wool; in the case of an adult, from twelve to fifteen grains, unless the surface requiring the application be very large. Should pain return, the solution may be advantageously resorted to at any early stage of the treatment."

Varicose Veins of the leg are treated by Mr. S. by the application of the Vienna paste, composed of two-fifths potassa fusa and three-fifths quick-lime. He has never seen evil consequence, either local or general, result from its application to the largest and most prominent vein, however thin the textures over it. "The eschars can scarcely be made too small, provided the materials of which it is composed be thoroughly good and recently mixed. The numbers vary according to the extent of the disease. From twelve to eighteen will suffice usually for a limb somewhat largely affected. As regards the period of time required for the after-treatment, it is of course no great moment whether the eschars be five or twenty-five, as they all progress towards recovery at the same time. The cure is generally, but not invariably, permanent."

Mr. Skey has little or no confidence in the efficacy of blisters and tincture of iodine in the treatment of *Housemaid's Bursæ*. Instead,

"he passes a full-sized thread through the centre of the swelling, be it large and hard, giving the sensation of a solid mass, but in the centre of which is always found a small cavity or fissure; or be it soft, and containing fluid, whether large or small, suppuration, in the course of from two to five or six days, will inevitably follow." The thread is then removed, and the disease being converted into an abscess, is treated as such. He states that on this principle he has cured from 100 to 200 cases. The only caution necessary is the removal of the thread when the orifices indicate the inflammatory action due to its presence. On the same principle, and with the same agent, is *Ranula* treated. "Indeed, it is quite remarkable with what rapidity this disease recedes under the action of the thread, whether the cyst be of average or of the largest size. Of the latter I have reported some, and treated several of such magnitude as to require the lower end of the thread to be brought out in the neck at some distance below the base of the jaw."

The following case of *Strangulated Hernia* is selected as possessing considerable interest in presenting complications calculated to render a diagnosis obscure: "An old woman, aged 88, was admitted in May last. She was the subject of a double hernia, femoral on the right, and inguinal on the left side. The right presented a hard and painless swelling, which, according to the old lady's positive declaration, had existed in its present condition for many years. It gave her neither pain nor discomfort. The left swelling was large, soft, and painful. Examination by the hand was invariably followed by sickness and by shooting pain into the abdomen. I thought I succeeded in returning a portion of the mass into the abdomen; but the symptoms continued, and I decided to operate. The woman being placed under the influence of chloroform, with the concurrence of my colleagues, Messrs. Lawrence, Stanley, and Savory, I exposed the mass on the left side. The sac contained omentum only, and a part of which was readily returned through an opening which admitted a finger without effort. The right swelling was left untouched; this decision being arrived at on the positive assurance again and again given by the patient that she had never suffered a moment's pain or inconvenience from the swelling in the right groin, and also from the probability that the intestine had been returned before the operation. The symptoms, however, continued unrelieved; vomiting and constipation were as urgent as before, although her constitutional powers appeared little reduced by the previous discipline. On the following day I operated on the hard and insensible swelling in the right groin. On opening

the sac, a quantity of venous blood escaped. A large knuckle of small intestine formed the mass of the swelling, which was highly congested with blood, and was shut off from the abdomen by a very tight stricture, which was divided with some difficulty. The peculiar features in this case are, 1st, the double hernia; 2dly, the peculiar sympathy manifested by the stomach, as the dominant organ of the abdomen, with the tumor on the left side, where there existed a strangulation; and, 3dly, the entire absence of physical pain connected with the femoral hernia of the right side. Although the sickness and vomiting were no doubt maintained by the condition of the strictured intestine of the right side, yet the immediate relationship between the stomach and the tumor of the left side was so striking as to attract the observation of my colleagues as well as myself. This fact, the entire absence of local pain on the right side, and the woman's repeated request that we should 'leave the right side alone,' decided the question of the operation to be selected."

5. Dr. Chaplain reports a case of lumbar hernia; this rare lesion, he says, never having been seen before except by Petit, Cloquet, and Pelletan. It occurred one month before the patient entered the hospital, by his being caught between a wall and the wheel of a cart. It was situated in the right side, immediately above the crest of the ileum, under the last rib; being of oval form, its greatest horizontal diameter about three inches, and its greatest vertical diameter two inches. Easily reducible by pressure, and upon the assumption of the recumbent posture, when a deep furrow into which the hand could be introduced, was formed. Standing caused its return; increased by cough and movements of the body. On gentle pressure, the tumor presented a fluctuation like that given by a cold abscess, and being compressed, it communicated a sensation of gurgling.

6. A railway engine-driver was admitted into the Chesterfield Hospital with simple fractures of the right thigh and leg, caused by being precipitated down an embankment twenty feet high, in consequence of his engine running off the track. On admission, the popliteal and anterior tibial arteries were pulsating, but the posterior tibial could not be distinguished. The following day neither of the tibials could be felt; the limb was very much swollen from the knee downward; the toes were cold; the instep and lower part of the leg were of lower temperature than natural; the skin presented patches of livid discoloration, particularly about the lower part of the leg. Mortification steadily advanced, the patient becoming gradually reduced, until the tenth day, when amputation of the leg was performed.

Immediately after the limb was examined, and the following appearances found: "The thick, muscular portion of the gastrocnemius and soleus muscles was much crushed and disintegrated, and the surrounding tissues were full of effused blood. Around their broken-down débris there was an attempt to set up suppurative action, and traces of pus might be detected mixed up with the decomposed tissues. *The posterior tibial artery was lacerated, and torn upwards of two inches.* The venæ comites were also ruptured. *The portion of the artery injured extended from above the origin of the peroneal to some distance below it.* The intermuscular fascia was torn, and the deep muscles of the leg but slightly injured. The posterior tibial nerve, the interosseous ligament, and the anterior tibial artery were entire. The tibia was transversely fractured about two inches below its upper extremity. The fracture was a simple dentated one, and the ends of the bone were not displaced. The fibula was fractured nearly three inches below obliquely." Patient died about thirteen hours after the operation.

7. The first use of plaster of Paris in the treatment of fractures is not of recent date, it having been employed, according to Dr. Little, as early as 1814, by Hendrikes, at the Hospital of Groningen, and afterwards by Hubenthal, Kyle, and Dieffenbach. It was also used by Velpeau, as described by Professor Van Buren, of this city, in the *American Journal of Medical Sciences*, for May, 1840. It had nearly fallen into disuse, however, until recently, when it was revived by Maisonneuve, of Paris. It was first used to any extent at the New York Hospital, about three months ago, and now, so satisfactory have been its results, that it has almost entirely taken the place of the ordinary starch bandage. Its advantages over the latter are stated to be: "Its facility of application, and its perfect adaptation to the limb; rapidity of drying and hardening—the plaster taking about five minutes 'to set' *while being held by the surgeon in its proper position*—the starch apparatus requiring several days to dry, unless artificial heat is applied; that the limb can be inspected daily if necessary, without removing all the apparatus, and therefore the plaster can be applied much earlier than the starch. It may be well to state that the starch apparatus has been generally used in this institution only after the fracture has become tolerably firm, since in several instances where it has been applied early in the treatment, marked deformity has resulted. But the plaster of Paris casing allows the anterior surface of the limb to be exposed, and any displacement can consequently be readily detected. Its advantage over the gutta percha is its great porosity; keeping the limb perfectly dry without confining the perspi-

ration, and thus doing away with one cause of irritation and excoriation. It does not require padding like the gutta percha, and it is much cheaper; an important item in hospital practice.

“ *The mode of application to the leg is as follows:* The limb is first shaven or slightly oiled; a piece of old, coarse, washed muslin is next selected of a size, so that when folded about four thicknesses, it is wide enough to envelop more than half of the circumference of the limb, and long enough to extend from a little below the under surface of the knee, to about five inches below the heel. The solution of plaster is then to be prepared. Fine, well-dried white plaster had better be selected, and before using, a small portion should be mixed with water in a spoon, and allowed ‘to set,’ with a view of ascertaining the length of time requisite for that process. If it is over five minutes, a small quantity of common salt may be dissolved in the water before adding the plaster. The more salt added, the sooner will the plaster ‘set.’ If delay be necessary, the addition of a few drops of carpenter’s glue or mucilage will subserve that end. Equal parts of water and plaster are the best proportions. The plaster is sprinkled in the water, and gradually mixed with it. The cloth, unfolded, is immersed in the solution, and well saturated; then quickly folded, as before arranged, and laid on a flat surface, as a board or table, and smoothed once or twice with the hand in order to remove any irregularities of its surface, and then, with the help of an assistant, applied to the posterior surface of the limb. The portion extending below the heel is turned up on the sole of the foot, the sides folded over the dorsum, a fold made at the ankle on either side, and a roller bandage applied pretty firmly over all. The limb is then to be held in a proper position (extension being made, if necessary, by the surgeon) until the plaster becomes hard. The time required in preparing the cloth, mixing the plaster, and applying the casing to the limb, need not be more than fifteen minutes. After the plaster is firm and the bandage removed, we will have a solid plaster of Paris case, partially enveloping the limb, leaving a portion of its anterior surface exposed to view. If any swelling occurs, evaporating lotions can be applied to the exposed surface, and we can always easily determine the relation of the fractured ends. If necessary, an anterior splint made of the same material can be applied, and then both bound together with adhesive plaster, and, if desirable, a roller bandage over all. If the anterior splint is not used, two or three strips of adhesive plaster, one inch wide, or bands of any kind, may be applied around the casing, which will serve to keep it firmly adjusted to the limb. Thus applied, we

have a most beautiful splint, partially enveloping the limb, making equal pressure, light, and allowing the patient to change his position in bed, to sit up in a chair, or go about on crutches, and a splint which can be easily made in any place where plaster is to be had.

“This mode of dressing may be applied with great advantage in most cases of *fractures of the tibia and fibula*. In oblique fractures of the tibia, with the projection of the superior fragment, it is well known how difficult it is to overcome the deformity; with the plaster of Paris splint, however, the results have been all that could be desired. After extension of the limb, on the part of an assistant, for the sake of bringing the fragments into perfect apposition, and while thus held, the plaster splint should be applied and allowed to harden. The limb is thus perfectly immovable. A strip of two or three thicknesses of muslin, about three inches wide, saturated with the plaster, may be applied transversely, if necessary, over the upper fragment, so as to bind it down in position.

“The cases in which this dressing is not applicable are those of fracture of the fibula with rupture of the internal lateral ligament, or what is more common, a chipping off of a portion of the internal malleolus, with the turning of the foot outward. Where the deformity is considerable, it cannot always be overcome at once, but requires steady pressure, with properly arranged pads, and the side-splints, to bring out that result. This effected to a certain extent, the plaster apparatus may be applied with advantage. In cases of fracture of the fibula, without any displacement of the foot, it may be applied early in the treatment; upon the entire subsidence of the swelling it will become necessary to apply a new one. This second dressing, in most cases, will be sufficient for the remaining treatment.

“*In fractures about the knee-joint*, and in cases of *synovitis*, where a posterior splint or knee-cap is needed in order to keep the limb in a straight or semi-flexed position, this mode of forming a splint can be made use of, and answers better than the gutta percha. We have applied it to one case of *synovitis*, after the acute symptoms had been subdued by the means of extension and counter-irritation, and it formed a very good posterior splint. *In fractures of the tarsal bones*, it may likewise be used with advantage. Here it should be long enough to envelop the foot as far up as the toes. Two cases of *fracture of the astragalus* have been treated in this manner with good results.

“For *fractures of the lower jaw*, it can be made use of to construct a splint in the usual manner.

“*In fractures of the neck of the humerus*, where a shoulder splint, as

recommended by Hamilton, is necessary, this may be made use of; it would make a much better and cheaper splint than the gutta percha, and it would fit the shoulder more accurately than any wooden splint that could be made.

“ In *fractures of the shaft of the bone* it may also be used. It should be long enough to extend from the shoulder to the hand, and applied to the outside of the limb, the limb being flexed to a right angle, and extension being made so as to keep the fragments in position until the plaster ‘sets.’ If necessary, a small splint made of the same material can be applied to the inner side of the arm, and both bound together with a bandage. The limb, of course, is to be placed in a sling.

“ For *fractures at the base of the condyles*, and other fractures in the vicinity of, and involving the elbow-joint, which require the arm to be kept in a flexed position, it is decidedly the best mode of dressing. For this purpose, angular splints made of tin, gutta percha, or paste-board, are commonly used, and all require some little time for their construction. The plaster of Paris splint can be made in five minutes, and will fit itself to the inequalities of the arm more accurately than any other.”

Dr. Little states that the plaster of Paris has never given rise to excoriations of any kind, and in several instances where it has been applied over denuded surfaces, it has appeared to exercise a healing influence.

8. The views that Dr. Smith takes in this highly interesting article are based mainly upon the fact that the point of insertion of the capsular ligament varies much in different individuals, as he has found by careful examination and accurate measurement of the normal capsule in sixty-one specimens. The following is the summary of his paper, as read before the Surgical Section of the New York Academy of Medicine:

“*First.*—The insertion of the capsular ligament of the hip-joint varies so greatly that scarcely any two specimens of the normal capsule taken from different subjects can be said to be inserted into the neck of the femur at the same point; and so wide are the differences seen, that, if a transverse fracture of the neck of the femur be located at a given distance from the posterior inter-trochanteric line, it will be found to be entirely included by the capsular ligament in one specimen, and on the posterior and inferior surfaces of the neck, half an inch or more external to the capsule, in another; hence it is impossible to determine the precise location of capsular insertion by measurements of the neck of the femur after the removal of its capsular liga-

ment; and it is also impossible to indicate the line of capsular attachment, by comparing the dried bone with a specimen taken from another subject, to which the capsule still remains attached.

"Second.—The descriptions of the insertion of the capsular ligament given in our works on anatomy are even more widely at variance than the differences seen in nature. Some locate the posterior insertion of the capsule at the middle of the posterior surface of the neck, some at the posterior inter-trochanteric line, and others at all points intermediate between these two extremes; hence, if fracture of the neck of the femur occurs at any point between the head of the bone and the posterior inter-trochanteric line, we can find authority among anatomists for believing that the fracture is intra-capsular; and it will be observed, that notwithstanding the extreme diversity among our authors in describing the insertion of the capsular ligament, *not a single one even intimates that it ever varies from the position which he himself has assigned to it.*

"Third.—The insertion of the capsular ligament is often removed by the morbid changes consequent upon fracture of the neck of the femur; therefore, the capsule of the fractured bone cannot be said to furnish reliable evidence that the fracture was within the normal capsule. The normal capsule is usually inserted into the middle of the posterior and inferior surfaces of the neck; in some instances a little nearer the head of the bone than this point, and in others more remote, *but never as far distant as the shaft of the bone*; while the capsule of the fractured bone is often found to have its insertion into the shaft, the entire neck of the bone having been removed by absorption before union occurred.

"Fourth.—The capsular ligaments of the opposite femurs of the same subject are exactly alike in their insertions into the neck of the bone; hence, if the surgeon, who makes an autopsy after union of fracture of the neck of the femur, removes both hip-joints, the insertion of the capsular ligament of the sound femur will show the normal insertion of the capsular ligament of the fractured bone; and a comparison of the two specimens will determine at once whether the line of union in the given specimen be altogether within the normal capsule.

"Fifth.—The line of union in a given specimen of fracture of the neck of the femur cannot be said to indicate the exact position of the line of fracture, if the neck suffered loss by absorption before union occurred; since it is impossible to determine that the loss of structure was entirely at the expense of either fragment of the neck. Some sur-

geons have recorded as examples of bony union of intra-capsular fracture, cases in which the neck was completely removed by absorption, and the head of the bone closely united to the shaft, and have claimed in these instances that the neck was fractured close to the head of the bone; while other surgeons, who also regarded the line of union as being identical with the line of fracture, have maintained that the fracture in each of the given specimens occurred close to the shaft of the bone.

“*Sixth.*—Under favorable circumstances, fractures of the neck of the femur, external to the capsular ligament, unite readily by bone; so, also, do fractures which are partly within and partly without the capsule; and it is highly probable that fractures within the capsule, which are followed by absorption, are sometimes united by bone, after the process of absorption has reached a point external to the normal capsule, where bony material is supplied; but this, if it ever does occur, can never be proven; for if the line of union be partly without the normal capsule, it is impossible to determine that the fracture was entirely within it; and we can never be positive that bony union of intra-capsular fracture has occurred, until a specimen is presented in which the line of union is found to be entirely included by the normal capsule.

“*Seventh.*—Fractures of the neck of the femur are in most instances followed by the absorption of a part, or the whole of the neck; and a careful review of the cases recorded as proofs of bony union of intra-capsular fracture, shows that, in the great majority of cases, the posterior surface of the neck of each specimen had lost very much of its length by absorption before union occurred, and that the line of union on this surface, although included by the morbid capsule of the specimen, was too near the shaft of the bone to be included by any specimen of the normal capsule.

“*Eighth.*—Fracture within the capsule is followed to a greater or less extent by disease of the different tissues which constitute the hip-joint; and the neck of the femur being very imperfectly nourished after the fracture, usually suffers great loss by absorption, before union occurs; so that its appearance after union resembles that appearance of the neck which is described by pathologists as the result of an interstitial absorption of the neck, which occurs without fracture, as a consequence of old age. So closely allied are these appearances, that eminent pathologists in this and in other countries have claimed, with at least a fair show of reason, that many of the specimens hitherto exhibited by surgeons as proofs of bony union of intra-capsular frac-

ture, have been examples illustrative of the changes produced by interstitial absorption; hence, in the further investigation of this subject, it becomes a matter of great importance that the diagnosis of fracture of the neck be clearly made out, and that it be vindicated by competent surgeons in consultation, and placed upon record in anticipation of an opportunity to complete the history of the case, it may be years afterwards, by describing the post-mortem appearance of the fractured bone."

9. In many infants with exomphalos, nothing more than an abdominal bandage and pad are required to effect a cure. In others, however, the protrusion increases in size; they suffer greatly with colicky pains and flatulence, and ordinary means for their relief fail. For the radical cure of the latter, Mr. Barwell has devised an operation which he has performed with complete success. Three of the five cases (all successful) are reported, and the operation in one described as follows:

"The hernia having been returned, and a careful examination showing that absolutely no abdominal protrusion remained, an assistant held his finger over the opening. The skin of the navel and surrounding part being pinched into a transverse fold, a bistoury was thrust through so as to make a longitudinal incision over or even into the sac, which was then freely opened, the tough remains of the umbilical vein turned upward and the ring exposed. There was now some little difficulty in keeping the bowel back, and yet allowing sufficient room for the further steps; but the spoon end of an ordinary grooved director was passed through the navel, and then held against the inner part of the opening, *i. e.*, against the inside of the belly, stopping the hole internally, instead of externally. Three silver sutures were then placed across the gap, the precaution being taken to seize each edge with forceps, and turn it forward, so as absolutely to see the point of the needle safely beyond all chance of wounding the bowel. When the sutures were all placed, but not fastened, the director was withdrawn, the wires were twisted, and the opening was seen to be satisfactorily closed. The external wound was also secured with silver sutures." In neither this nor the other four cases was there a single inflammatory symptom following the operation. The respective ages of the three cases given were six months, thirteen months, and eight years; and Mr. Barwell adds, that the operation may be performed as well on adults.

10. Mr. Paget relates the case of a boy, aged three years and eight months, who was brought to the Leicester Infirmary with the following history: For two years he had had violent pain in micturition,

which was very frequent, attended by sudden stoppages of the stream, and the making of a larger quantity of water immediately after; violent screaming, pulling of the parts, and forcing of fæces. Around the anus were several livid lumps of hæmorrhoids. No urine ever passed except while in a sitting posture. The sound being introduced, an indication of stone was given, but the click, though audible, was not sufficiently clear to seem to warrant an operation. However, after much hesitation, being influenced by the character and intensity of the symptoms, the hopefulness of permanent good if there were a stone, and the rare occurrence of death after lithotomy, especially in children, the operation was determined upon and performed. Frequent attempts with various forceps were made, after the bladder had been reached, but no stone could be found; the movements of the forceps imparted a feeling of slight grating like that often produced by steel instruments rubbing over cut muscular fibres, but no click could be heard. The case terminated fatally in forty-eight hours. On examination, the genito-urinary organs in every part were found free from calcareous matter. After removing the bladder, the sound was passed with the integuments of the abdomen closed, and the muffled click was heard again, though less distinctly. On opening the pelvis again, this was found to arise from the point of the sound impinging upon the iliac portion of the brim of the pelvis, the edge of which was unusually thin and sharp, which Mr. Paget thought might be the explanation of the click and feeling imparted to the instrument before the operation.

11. The child was born with an imperforate anus in 1852. The late M. Amussat, after a very careful and prolonged dissection, could not find the *cul-de-sac* of the imperforate bowel. It then became a question whether the search should be carried further and at random into the pelvis, or whether a lumbar anus should be made. On consultation with the medical men present, he decided on the latter measure. By a careful dissection, the colon was reached, and gases escaped. Notwithstanding the severity of the two operations, the child did well; the motions passed through the abnormal orifice, the patency of which had been secured in the ordinary way. Six days after it was decided, on consultation with eminent surgeons, that no fresh operation should then be undertaken. At six months old the child was well and cheerful, evacuations regularly taking place at the lumbar opening, the new aperture being usually stopped by a wax plug. M. Amussat, Jr., had an opportunity, in 1859, seven years after the operation was performed, of seeing the child. He was quite well and

lively, the functions of the new anus being very regular in their performance. A wax bougie is worn in the aperture, fastened by an elastic belt.

12. "Several weeks previously, the young man (aged 17 years) had an attack of what the then attending physician supposed was erysipelas of the leg. All the soft parts, from the knee to the ankle, were involved in intense inflammation. In a few days there was extensive suppuration. At the end of about three weeks from the commencement of the inflammation, the young man was moved from one bed to another. As this was being done, he complained of intense pain, and there was an escape of blood from the sinuses just below the head of the tibia, to the extent, as the mother believes, of a pint. When the limb was adjusted, it assumed the exact shape, say the family, in which I found it. Chloroform being given, it was demonstrated as being completely separated at the point mentioned. Even at the time of this examination, only about four weeks from the commencement of the symptoms had elapsed, but I have no sort of doubt but the separation was complete from the time of the removal, a week before. This presents a case which, as far as my observation extends, is without a parallel.

"Although all this had occurred with little, if any, perceptible effort at substitution, yet the lad's general condition being admirable, it was thought best to put the limb in the best possible shape and await the efforts of nature. For three weeks everything progressed favorably. There was now, however, an acute exacerbation, in connection with which, the lower part of the leg and the dorsum of the foot were mainly involved. This lasted about a week, and evidently grew out of an extension of the ostitis to the whole diaphysis of the tibia. As it subsided, it left the whole dorsum of the foot duskiely discolored, and this soon sloughed. It was now obvious that amputation offered the only chance of life, but even this was impracticable under existing circumstances. A liberal diet, with anodynes, stimulants and tonics, continued a week, brought about a very fair general condition, when the operation was performed about the middle of the thigh. All the incidents of the operation were most pleasant. There was scarcely an appreciable loss of blood, or shock to the system. For about a week, the wound healed finely, and the patient's condition improved satisfactorily. At this time he was attacked with pain about the right pleura. Soon there was cough, and the symptoms of pneumonia, of which he died, thirteen days after the operation.

"The dissection was intensely interesting. The fibula had entirely

escaped. The shaft of the tibia was separated from both heads. The upper part of it had evidently perished at an earlier period than the lower, and it was already surrounded by a somewhat dense mass of lymph, perforated by large openings. This was evidently an embryonic substitute, with its cloacæ. The knee-joint was filled with pus, and its articular cartilage was extensively separated. There were sinuses extending even above the seat of the amputation. More than half the soft parts constituting the foot were found in a sloughing condition."

REPORT ON INFANTILE PATHOLOGY AND THERAPEUTICS.

By A. JACOBI, M.D., Prof. of Infantile Pathology and Therapeutics in the New York Medical College.

I. *Chronology and Geography of Epidemics of Croup and Diphtheria.* By Dr. AUGUST HIRSCH. (Manual of Historico-Geographical Pathology, 2nd Vol., 1862.)

II. *Acute Fatty Degeneration of the New-Born.* By Dr. C. HECKER and Dr. L. BUHL. (Obstetrical Clinic, 1861.)

I. *Croup and Diphtheria.*—Dr. August Hirsch (Manual of Historico-Geographical Pathology, 2d vol., 1862,) denies the epidemic occurrence of croup in the literal meaning of the term. The same opinion has been expressed by Formey and Guersant, and Elliotson says: "Croup is sometimes epidemic; that is to say, a great number of children in particular seasons are affected by it." The majority of such "epidemics" coincided with the frequent occurrence of pulmonary catarrhs, and epidemics of whooping-cough. Autumn, winter, and spring were always the seasons in which croup was prominent, and according to numerous reports, the injurious atmospheric influences were shown by an unusually large number of catarrhal or inflammatory diseases of the respiratory organs. Moreover, many epidemics have been described as "croup" which were nothing else than diphtheria. As to diphtheria, the author is by no means of the number of those who assert the identity of croup and diphtheria. The only things common to both are: 1st, the diseased organ; 2d, the morphological character of the morbid process, viz., the fibrinous exudation; but even this identity is not a constant one, as there is diphtheria without affection of the larynx, and croup without membranous exudation. The differences the author lays stress on as conclusive are the following: Croup depends on climate, geographically, and on season and weather, individually; diphtheria is independent from either.

Croup is not seen as epidemic in the true meaning of the word; diphtheria is rarely seen otherwise than epidemical. Croup does not depend on social or hygienic influences; diphtheria, however, like other zymotic diseases, to a great extent on moistness of the soil, dirt, bad ventilation, crowded population, and all the causes of accumulation of noxious effluvia. Croup is a disease of the infantile age, and is rarely met with beyond the seventh year; diphtheria is observed at any age. Croup is a local disease; diphtheria a disease of the general system, with local deposits. Croup proves fatal by asphyxia, by either fibrinous exudation or occlusion of the glottis by reflex action; diphtheria more by general intoxication than by the local affection. Croup is not proved to be contagious; diphtheria is a contagious disease.

Diphtheria may, safely enough, be traced to ancient times. But before the sixteenth century there are no unimpeachable reports of epidemics, nor sufficiently distinct descriptions of the symptoms. Therefore the author excludes from his invaluable list of epidemics of diphtheria all the previous ones the nature of which may be considered doubtful. Having studied all the original sources, he has also excluded many which have, by other historians, been taken as diphtheria; thus from the last century the English reports of Grant, Fothergill, Huxham, Rowley, Levison, Bisset, Johnstone, etc.; the French, of Bouchet, Marteau, and Planchou; the Swiss, of Tissot; the North American, of Douglass and Colden, and the Swedish. The symptomatology of many of them being very indistinct, and that of others proving them to have been malignant scarlatina.

CHRONOLOGY OF EPIDEMICS OF CROUP AS FAR AS KNOWN.

Year.	Where Observed.	Season of Prevalence.	Author.
1728	York.	February.	Wintringham.
1758	Heilbronn.		Weber.
1761	Gottingue.	September.	Riepenhausen.
1798	Graefenthal.	Autumn and winter	Winckler.
1801	Hamburgh.	October, December.	Wigand.
1804	Altona.	Autumn and winter	Gutfeldt.
1804	Portsmouth, N. H.	October, December.	Spalding.
1805	Wurzburg.	Feb. and winter.	Horsch.
1807	Tübingen, etc., (Württemberg.)	Spring and autumn.	Autenrieth, Eschenmayer.
1807-8	Ratzburg.	December, April.	Wächter.
1807-8	Vienna.	December, March.	Friedländer, Goelis.
1809-10	Edinburgh.	December, June.	Robertson.
1810	Plainfield, Mass.	June.	Porter.
1811	Waida.	March and April.	Kühn.

Year.	Where Observed.	Season of Prevalence.	Author.
1812	Baireuth.	January, February.	Sackenreuter.
1822	Engelholm, (Sweden.)	Spring and autumn.	Report in Svensk. Läk. Sällsk.
1823	Philipstad, Strömstad, (Sweden.)	Winter and spring.	"
1823	Malmö Län.	Autumn.	"
1823	Copenhagen.	March.	Bang.
1824	Salzburg.	Nov., December.	Aberle.
1834	Tuttlingen.	January, April.	Heyfelder.
1835	Wadovice.	Spring.	Rohrer.
1835	Rhenish Prussia.	Spring.	Rhein. Sanitätsber., 1835.
1835	Sigmaringue.	April, September.	Heyfelder.
1836-37	Schwenningue.	November, May.	Rösch.
1837	Zurich.	Winter and spring.	Special Report.
1839	Veile, (Denmark.)	Spring and autumn.	Bibl. for Läger., 1841.
1840	Voigtsberg, (Saxonia.)	Autumn.	Special Report.
1842	Eastern Prussia.	Winter.	Lietzan.
1844	Gemünd.	Jan., February.	Rhenish Special Reports.
1844	Denmark.	Spring.	Sundhetskoll. Forhandl., 1845.
1844-45	Greifswald, (Pomerania.)	Winter and spring.	Stubenrauch.
1845	Rhenish Prussia.	January, March.	Rhenish Special Reports.

CHRONOLOGY OF EPIDEMICS OF DIPHTHERIA.

Year.	Country.	District.	Author.
1583	Spain.	Sevilla.	Nunnez.
1585	"	All Andalusia.	Herrera.
1587-90	"	Sevilla and neighborhood.	Villalba.
1590-91	"	All Andalusia.	Villareal.
1596	"	Granada: first city, afterwards kingdom.	Villalba.
1600 sq.	"	All Estremadura.	Nunnez.
1603 sq.	"	All New Castilia.	Cascales.
1610-18	"	All Spain.	Mercado, Herrera, de San Millan, de Soto, Meneses, Sola, Tamayo, de la Pera, Charta imperialis, de Heredia, Tontecha.
1610	Italy.	Naples, (called male in Can-na.)	Nola.

1618-30	Italy.	Naples first, afterwards all Southern Italy and Holy See.	Foglia, Sgambati, Carnevale, Bartholino, Ueto, Buonocore, Severino.
1620 sq.	Sicily, Sardinia, Malba.	Until 1630.	Alaimo, Prosini, Cortes.
1630	Spain.	Saragossa and other places of Andalusia.	Gil de Pina, Zacutus Lucitanus.
1650	Italy.	Latium.	Panaroli.
1666	Spain.	Toledo and many other places.	Vasquez.
1701	Ionian Is'ds	Especially on Milo.	Tournefort.
1736-37	France.	Rouen, (doubtful report.)	Le Cat.
1744-48	England.	Liskard, and other places of Cornwallis.	Starr.
1745-46	Netherlands	Dalham, (Prov. of Luttich.)	Zaff.
1745	France.	Paris, (in College de Louis le Grand.)	Astruc.
1746	"	All Paris.	Malouin, Bouillaud, Chomel.
1747	"	All Paris, 1, and Orleans, 2.	1. Malouin. 2. Du Hamel.
1747	Italy.	Cremona, and the whole province.	Ghisi
1748	France.	Paris 1, Lille 2, Rouen 3, Chalons s. M. 4. Sporadic cases already, 1745-47, in Rouen.	1, Malouin; Bouillaud, Chomel, 2. Boucher, 3. Le Cat, 4. Navier.
1748-50	"	Guyenne, all over the province.	Rolin.
1749	Portugal.	Lisbon.	Barbosa.
1750 sq.	Spain.	New Castilia 1, and Galicia 2.	1, Villalba; 2, Thierry.
1752	Germany.	Harz Mountain.	Hertzog.
1752	Switzerland.	Simmenthal, in Berne.	Langhans.
1752	N. America.	New York, (numerous.)	Middleton.
1754	Holland.	Rotterdam and Dordrecht.	Stocke.
1755	Sweden.	All over the country.	Berg.
1755	Germany.	Rampitz, near Frankfort-on-the-Oder.	Voa Bergen.
1757	Sweden.	Stockholm.	Berg.
1761-62	"	Upsala and neighborhood 1, Colmer, etc., 2.	1, Wilcke; 2, Wahlbom.
1764-71	Spain.	P. has seen 300 cases in Valencia.	Pasqual.
1769-70	Holland.	Utrecht.	Keetel.
1771-72	N. America.	New York.	Bard.
1774	France.	Forges, Lissing, etc., in Normandy.	Lepecq.

1775	N. America.	New England.	Webster.
1780	West Indies.	Jamaica, (very numerous.)	Moseley.
1786	Portugal.	Lisbon.	Barbosa.
1786	Germany.	Istria.	Panzani.
1787	France.	Poitiers.	Lamarque.
1790	England.	London, (very numerous.)	Denman.
1793	"	Chesham and neighboring mountains.	Rumsey.
1799	N. America.	Washington, Va., (George Washington.)	Caldwell.
1801	Germany.	Eastern Prussia 1, Marienwerder 2.	1, Elsner. 2, Maercker.
1809	N. America.	Philadelphia.	Caldwell.
1818 sq.	France.	Tours 1, Paris 2; Gordon, Dep. Lot, 3.	1, Bretonneau. 2, Ribes. 3, Desyenettes.
1819	Scotland.	Glasgow, (since 1812.)	Mackenzie.
1820	France.	Nantes.	Prion.
1821	Peru.	Extensively, for the first time.	Odriozola.
1822	France.	Arras and neighborhood.	Arch. Génér., VII.
1823-24	Italy.	Veltlin.	Balardini.
1824	France.	Eure et Loire 1; La Ferrière, near Tours, 2.	1, Girouard. 2, Bretonneau.
1824	Norway.	Aggerhuus.	Munck.
1824	St. Helene.		Ritchie.
1825	France.	Nantes 1, Dep. Maine et Loire 2, Touraine 3, Vendôme 4.	1, Prion; 2, Ouvrard; 3, Menon, Bretonneau; 4, Gendron.
1825	Scotland.	Kelso, Co. of Roxburgh.	Robertson.
1826	France.	Vendôme 1, Dep. Seine et Marne 2, Indre et Loire 3, Haut-Vienne 4; Villandry, in Touraine, 5.	1, Gendron; 2, Ferrand; 3, Guinnier; 4, Mazard; 5, Bretonneau.
1826	Switzerland.	Waadt.	Baud.
1826	N. America.	New York.	Belden.
1827	France.	Dep. Loiret 1, Sologne 2, Orne 3; Seine 4.	1, Ranque, Lepage. 2, Ranque; 3, Bianquin; 4, Bourgeois.
1828	France.	Dep. Orne, 1; Loire et Cher, Indre et Loire, Loiret, 2.	1, Emangard. 2, Report.
1828	N. America.	Danville, Ky.	Smith.
1829	France.	La Flèche, (military school,) 1; Ortins, Dep. Loire et Cher.	1, Lespine. 2, Gendron.
1830	N. America.	Northumberland, Pa.	Jackson.

1833	France.	Dep. Mayence, 1; Indre et Loire, 2.	1, Lemer cier. 2, Bridel.
1835-36	Ireland.	Dublin.	Bewley.
1836	East Indies.	Suburb of Calcutta.	Jackson.
1836	N. America.	New Archangel.	Blaschke.
1836	Peru.	Jauga.	Tschudi.
1839	France.	Behaupal, Dep. Vosges.	George.
1839	Isle de Bourbon.		Dussac.
1840	France.	Paris.	Becquerel, Boudet.
1841 sq.	"	Antun, and Dep. Nièvre.	Daviot.
1844	Italy.	Castelpetroso, in Naples.	Ferrara.
1844	N. America.	Salem, N. J., and neighborhood.	Gibbon.
1845	"	Philadelphia.	Meigs.
1845	Italy.	Vasto, in Naples.	Barbarotta.
1845	Norway.	District of Drontheim, (also 1846 and '47.)	Roll.
1846	France.	Paris, (numerous.)	Vauthier.
1846	Denmark.	Logstör.	Beck.
1846	Norway.	Drontheim 1, Christiania 2.	1, Roll; 2, Rabe.
1847	Germany.	Hadamar, in Nassau.	Santlus.
1847	France.	Paris.	Vauthier.
1847	Norway.	Drontheim 1, Lavanger and Skoge 2, Namdal 3.	1, Roll. 2, Ditrichsen. 3, Iehe.
1847	Denmark.	Almost all over the country.	Sundhedskoll. Forhandl., 1847.
1847 sq.	N. America.	Western States, along the Mississippi, 1; Ohio, (Sara hsville, Morgan County, 1849, Cos. of Monroe and Guernsey,) 2.	1, Beck; 2, Welsh.
1848	France.	Paris, in Hospital Necker.	Empis.
1848	Denmark.	Extensively, especially in the district of Kronborg.	Sundhedskoll., 1848.
1848	N. America.	Philadelphia.	Meigs.
1849	Germany.	Koenigsberg.	Bohn.
1849	Denmark.	Seeland, Tyen, Aarhuus.	Sundhetskoll. Ver handl. for Aaret, 1850.
1849	England.	Haverfordwest, Wales.	Brown.
1850	Germany.	Koenigsberg.	Bohn.
1850	France.	Aigle, in Dep. Orne, 1; Verdun, Dep. Mense, 2.	1, Mazier. 2, Neucourt.
1850	Denmark.	Seeland, Lolland, Tyen, Rybe, Aarhuus, Aalberg.	Sundhestkoll. Ver handl. for Aaret, 1851.
1851	Germany.	Koenigsberg.	Bohn.
1851	France.	Vitry, Dep. Morne.	Valentin.

1852	France.	Dep. Marne, 1; Pas de Calais, Marne, Lot et Garonne, 2.	1, Valentin; 2, Gaultier de Thaubry.
1852	Sweden.	Christianhamn, Arboga, Helsingborg.	Sundhestkoll. Forhandl. for Aaret, 1852.
1853	France.	Dep. Aisne, Valenciennes, 1; Avignon, 2.	1, Gaultier. 2, Lespiau.
1853	Germany.	Hadamar, Nassau.	Santlus.
1853	England.	Kent and Essex.	Radcliffe.
1853	Sweden.	Helsingborg, Mariafred, etc.	Sundhestkoll. Forhandl. for Aaret, 1853.
1854	England.	Kent and Essex.	Radcliffe.
1854	Switzerland.	Zurich.	Wäckerling.
1855	Netherlands	Amsterdam.	Von Capelle.
1855	Sweden.	Haparanda and Helsingborg.	Mediz. Zeit. Russlands, 1860. Wisstrands.
1855	Turkey.	French Army.	Haspel.
1855-56	France.	Paris 1, Boulogne 2, and other districts 3.	1, Trousseau, Oulmont, Isambert, Gubler, Fiéve, <i>Bull. Thérap.</i> , 1855. 2, Bayen. 3, Bouillon, Lagrange.
1856	Netherlands	Amsterdam.	Von Capelle.
1856	Germany.	Koenigsberg.	Olshausen, Bohn.
1856	Sweden.	Extensively.	Wistrand, 1857.
1856	England.	Birmingham, 1; Launceston, Cornwallis, 2.	1, Heslop; 2, Thomson.
1856 sq.	N. America.	California, Upper; Sacramento Valley.	Gibbons, Fourgeaud, Blake, Whitney.
1856	Peru.	Peura, Truxillo, Hadcho, Lima.	
1857	Portugal.	Extensively.	Odriozola.
1857	France.	Haute-Marne, 1; Marvais, near Poitiers, 2; Loire Inférieure, 3.	1, Forgeot; 2, Bonnet; 3, Journ. f Kinderk., 1861.
1857	Netherlands	Amsterdam.	Von Capelle.
1857	Germany.	Koenigsberg, Munich.	Hauner.
1857	England.	East, Southeast, and Southwest, 1; Kent, 2, 3; Sussex, Essex, 4, 5; Surrey, 6; Wiltshire, 7; Suffolk, Lincoln, 8; Staffordshire, Cornwallis, Devon.	1, Hart, Hillier; 2, Rigder; 3, Smith; 4, Stiles; 5, Brydon; 6, Bottomley; 7, Jennings; 8, McKinder.
1857	N. America.	Albany, N. Y.; California.	Willard.

1857	Brazils.	English ship in the port at Rio.	Makay.
1858	Russia.	All over Curland.	Med. Zeitg. Russlands, 1859.
1858	Germany.	Koenigsberg, Munich, Central Franconia.	Hauner.
1858	France.	Dep. Yonne, 1; Charente Inférieure.	1, Duche; 2, Robert.
1858	England.	Almost everywhere: 1, Kent, 2, Sussex, Hampshire, Surrey, Berkshire, Middlesex; 3, Essex, Hartfordshire; 4, Bedford, Northampton, Huntingdon, Cambridge, Suffolk, Norfolk, Dorset, Wiltshire, Somerset; 5, Cornwallis, Worcester, Warwick, Stafford, Shropshire, Derby, Chester, Nottingham, Lincoln, 6; 7, Lancashire, Yorkshire.	1, Hart. 2, Monkton. 3, Ballard. 4, Sanderson. 5, M'Donald. 6, Gross. 7, Ellis.
1858	N. America.	Sussex Co., N. J., 1; Milford, Orange, Conn., 2; New York, 3; Richmond, Wayne, New Castle, Ind., 4; California.	1, Ryerson. 2, Beardsley. 3, Jacobi. 4, Brower.
1858	Peru.	Like 1856 and 1857.	Odriozola.
1859	Russia.	Moscow.	Kronenberg.
1859	France.	Paris, 1; Bayonne, 2.	1, Guersant, Moynier; 2, Silva.
1859	Netherlands	Many districts, 1. Groningen, 2; Bedum, 3; Friesland, Zuid Holland, 4; Gelderland.	1, Ali Cohen, Lonceq; 2, De la Faille, Reilingh; 3, Ali Cohen; 4, Werner.
1859	England.	Kent, Sussex, Berkshire, 1; Essex, Sussex, Norfolk, Somerset, Stafford, Derby, 2; Nottingham, Lincoln, Lancashire, Yorkshire, Westmoreland, Wales.	1, <i>Lancet</i> , 1859; 2, Crighton.
1859	N. America.	New York, 1; Philadelphia, 2; Indiana, Mississippi, at Sardis, and generally between the Mississippi and Tallahatchie, 3.	1, Jacobi; 2, Jewell; 3, Williamson.

1860	Netherlands	Like 1859. 1, Gelderland; 2, Zuid Holland and Hague; 3, Friesland, N. Brabant.	1, Ali Cohen ; 2, Donders; 3, Nederl. Tijdschr. for Geneeskunde IV.
1860	N. America.	New York, like 1858 and 1859. Tompkins, Westchester, Rockland Co's, 1; Philadelphia, 2; Oakland College, Miss.	1, <i>American Medical Times</i> , 1861, Jan.; 2, Keller, Read; 3, Goldsmith.

II. *Acute Fatty Degeneration of the New-Born*.—Drs. C. Hecker and L. Buhl (*Obstetrical Clinic*, 1861,) describe under this name a large number of highly interesting anomalies in the body of the newly-born. They are usually observed in well-developed infants; a majority of whom are born in an asphyctic condition. Beside some diarrhœic liquids, they soon evacuate blood through the anus, or bring it up from the stomach; become icteric after three or six days, and are frequently attacked with an irrepressible hæmorrhage from the umbilicus. This umbilical hæmorrhage, according to Grandidier's statistical researches, generally takes place on the fifth day. Besides, there are other hæmorrhages; extravasations being found in the conjunctiva, mucous membrane of the mouth and nose, in the external ear, the mucous membrane of the uterus, and, as purpura, in the cutis. This affection is sometimes accompanied with anasarca. Many of the infants perish with the symptoms of cyanosis, within a very few hours; very few survive the second week; the longer they live, however, the more they suffer from anæmia and jaundice. According to Grandidier, the rate of deaths among the infants affected with umbilical hæmorrhage was 83.5 per cent. Nevertheless, there is neither proof of any supervening or congenital infection, nor the symptoms of umbilical phlebitis. All these symptoms, however, were considered as of an obscure and singular character. For there was no anomaly in the brain or its membranes, no congenital disease of the heart or respiratory organs by which cyanosis and asphyxia could be explained; there was no obstruction in the biliary ducts to account for the jaundice, nor a morbid change in the umbilical vessels to explain the hæmorrhage. Now, Grandidier has proved already that umbilical hæmorrhages have no connection with hæmophilia, for hereditary transmission is a well-known fact in regard to the latter, while it does not exist in the former, and hæmophilia destroys twelve times as many males as females, while but twice the number of males, in proportion to that of females, die of umbilical hæmorrhage. Moreover, in hæmophilic pa

tients, only three per cent. were affected with umbilical hæmorrhage. Therefore, the explanation was sought for in some dissolution of the blood, which was the more readily assumed to be the cause of all the above-mentioned troubles, the more frequently the blood contained in the heart and all the blood-vessels was found uncoagulated and of a livid color.

In all the cases examined by the authors, they found, besides the either cyanotic or icteric color, (with or without anasarca,) and the above-mentioned condition of the umbilicus and the umbilical vessels, and of the blood, the following anomalies:

Extravasations were not only found on the surface, but also in a large number of internal organs, cerebral membranes, pulmonary and costal pleura, connective tissue of mediastinum, thymus, pericardium, peritoneum, omentum; the majority of mucous membranes and muscles. They vary from the size of the head of a pin to that of a pea, or larger. The brain was soft, and unless anæmic from constant hæmorrhages, hyperæmic, and of a livid, or when there was icterus, of a yellowish color. The lungs, in the majority of cases, contained more or less voluminous apoplectic spots, and therefore the bronchi exhibited blood or bloody (brown or yellow) mucus. Besides, there was, to some extent, pulmonary œdema, and the microscopical examination revealed fat-globules in the epithelial cells, and the presence of a large number of myeline corpuscles. Endo- and pericardium exhibited a large number of punctate extravasations; in recent cases the heart-muscle was rigid and of a dark-red color; in older cases, softer and paler; always, however, more fragile; moreover, in proportion to the degree of cyanosis, the examination proved fatty degeneration to have taken place in many, most, or almost all the primitive muscular fibres. The endocardium and the inner membrane of the blood-vessels was livid in cyanosis, yellow in icterus. The liver was also more fragile, hyperæmic, and of normal size and shape in recent cases; anæmic and icteric, enlarged, and with less sharp margins in older ones. The cells of the liver, according to the case, were always found more or less filled with fat-globules, and the coloring matter of bile. Spleen enlarged, and very soft. The walls of stomach and intestines were thickened and swelled by serum; there was blood in the stomach and small intestines; sometimes down to the ileo-cæcal valve and the colon; and moreover, masses of pale, water-like, or bile-colored liquids and epithelium. The intestine, and especially the small intestines and villi, looked infiltrated; the latter contained fat-globules. The kidneys, unless the patient died on the first day, or lived a considerable

time, always showed a copious infarction of uric acid; extravasations were found in the mucous membranes of the renal pelvis, ureter, and urinary bladder; even in the tissue of the kidneys itself. The papillæ, and also the cortical substance, were swelled; either hyperæmic or anæmic, according to the duration of the case; in older cases, the canals contained not only urate of ammonia, but also biliary pigment. The epithelia of the Bellinian canals had undergone complete fatty degeneration, the contents of the cells consisting of nothing but fat-globules.

Thus all the local anomalies appear to be but part of a general disorder in the nutrition of the system, which is evidently congenital, and the origin of which dates from the last days of utero-gestation; it is very acute, and shows itself especially in the heart, liver, and kidneys; less in the stomach and intestines, by the acute transformation of the cellular contents into fat, and some albuminate. That is to say, it is the second stage of parenchymatous inflammation, viz., acute fatty degeneration. Therefore, asphyxia and cyanosis, unexplained hitherto, take their origin from the pulmonary affection depending on the inflammation of the heart. Cyanosis, further, is the cause of the peculiar livid color of the liquid blood and the brain. Jaundice, also unexplained hitherto, depends in many cases on the affection of the liver, which here, connected with the other anomalies in the kidneys, stomach and intestines, and heart-muscle, bears the greatest similarity to acute atrophy of the liver. The fatty degeneration of the kidneys may be taken as the cause of anasarca, which has been observed occasionally. The hæmorrhages from the intestines and stomach, and umbilicus, are readily explained by cyanosis liquefying the blood; by acute icterus; acute Bright's disease; by inflammation of the heart, retarding the circulation; and by the more than probable presence of anomalies in both general nutrition and the condition of the small blood-vessels. Death results from hæmorrhage, the change in the condition of the blood, and the general deficiency in nutrition. Something similar to this disease is found in adults, in whom sometimes myocarditis with either pulmonary œdema or apoplexy, or Bright's disease with anasarca and albuminuria, or jaundice depending on acute atrophy of the liver with intestinal affections, and especially hæmorrhages, appear most prominent.

Report of a Committee of the Associate Medical Members of the Sanitary Commission on the Subject of Pneumonia.

Of the diseases which the Army Surgeon must expect to encounter in the present unhappy contest, pneumonia is one of the most important. This disease has already prevailed to a considerable extent among the troops on the Potomac and in the West; but it will, doubtless, prevail to a much greater extent during the months of winter and spring. It prevails habitually much more among the inhabitants of the Middle and Southern States than at the North. It will be more likely to occur among Northern soldiers in a Southern climate than among native or acclimated residents. Statistics show that it occurs much oftener among those who are exposed to the vicissitudes of the weather than among those whose occupations involve confinement within doors; hence, it may be expected to prevail especially among troops in active service. Not only the prevalence, but the gravity, of this disease is greater in the Middle and Southern than in the Northern States. A larger ratio of deaths in the former than in the latter is to be expected. In sections in which the periodical fevers are rife, pneumonia is apt to be extremely fatal. This is the uniform testimony of physicians practicing in malarious regions, especially at the South.

These considerations show sufficiently the importance of the subject of pneumonia, at this time, to the Army Surgeon. But others may be added. Not only has pneumonia been studied, within the last few years, with diligence and success, as regards its morbid anatomy, symptomatic phenomena, pathological character and laws, but, perhaps, on no other important inflammatory affection has clinical observation been brought to bear so fully and efficiently as regards the management. In the first place, abundant facts have been collected respecting its course when uninfluenced by active medication—the true point of departure for the satisfactory study of therapeutics, as applied to any disease. And, in the second place, data have been afforded for judging of the value of different methods of treatment. As a consequence, a considerable change has taken place in the opinions and practice of not a few members of the medical profession with respect to the management of pneumonia. Therapeutical measures, which, but a few years ago, were generally regarded as essential to its successful treatment, are now by many deemed often needless and hurtful. On the other hand, measures formerly considered to be uncalled for and hazardous, are now thought to be highly important in certain cases. Believing that, after making due allowance for a tendency to pass to opposite extremes, which characterizes the fluctuations of medical doctrines, a real and truly important progress has been made of late in practical views respecting this disease, it is not unreasonable to suppose that, of those who have been called by the present contest from civil to military practice, some may not have given much attention to the subject, and, therefore, adhere to views which, with our present knowledge, are not tenable. Many of the medical officers of

the army have seen but little of the disease in comparison with the opportunities for observation which will now be opened in their new sphere of action. Moreover, most of those who are entering upon military experience have seen but little of pneumonia as it will be presented to them in soldiers occupying the Middle and Southern States. These last-mentioned considerations, doubtless, have been in the minds of the members of the Sanitary Commission, at whose instance this report is submitted.

It is hardly necessary to say that the discussion of questions relating, directly or indirectly, to the management of pneumonia, would be here out of place. The purpose of this report is to premise a few propositions, embodying certain pathological facts, having obvious relations to the management of the disease; and, then, with reference to the leading indications for treatment, and the employment of different therapeutical measures, to present, as concisely and compactly as possible, the practical views which appear to the Committee to be most consistent with our present knowledge of the disease, and with the results of clinical experience.

1. Ordinary pneumonia, uncomplicated, and not extending over more than a single lobe, does not, *per se*, involve much, if any, danger to life. The truth of this statement has been shown by large collections of cases in which the disease has been allowed to pursue its course without medical treatment, or with only palliative remedies. A fatal termination, therefore, in such cases, must depend on circumstances incidental to the disease, or on injudicious interference. It is obvious that, when active measures of treatment are indicated in such cases, the indications are derived from the incidental circumstances more than from the disease itself.

2. The disease is much more grave, and becomes dangerous to life, when it invades more than a lobe, affecting an entire lung, or, more rarely, portions of both lungs, (double pneumonia.) The greater proportion of these cases is one of the reasons of the greater fatality of pneumonia at the South. In many of these cases, however, recovery takes place, and the symptoms do not always denote great gravity or danger. A source of gravity in these cases, to which attention has not been sufficiently directed, is the large amount of exudation-matter deposited in the lungs. In fatal cases, in which an entire lung is solidified, the increased weight of the affected lung, due to the solidifying deposit, may be as high as four pounds. This large quantity of matter is, of course, withdrawn from the solid constituents of the blood.*

3. The complications of pneumonia account for the danger to life in certain cases. One of the most serious complications is pericarditis. This occurs oftener at the South than at the North. This complication does not render the termination necessarily fatal. Patients may recover, even when, in addition to this complication, an entire

* See Clinical Lecture, *New Orleans Medical Times*, March, 1861, and the *New York Medical Times*.

lung is involved. A degree of pleurisy exceeding that generally co-existing with pneumonia, and attended by considerable effusion, (which is rare,) accounts for the danger in some cases. It may be remarked here, that the coexisting pleurisy is the source of acute pain in pneumonia. Pneumonia, without pleurisy, is attended with little or no pain. Intermitting fever and pneumonia may be associated—each affection serving to mask, to a greater or less extent, the other. This complication is attended with great danger, and calls for prompt and efficient measures of treatment addressed to the intermitting fever. In the intemperate, delirium tremens is apt to become developed, and prove a serious complication, claiming efficient treatment. Cholæmia, or jaundice, is occasionally an incidental event in pneumonia. It does not, however, denote an important hepatic complication, and does not call for active remedies designed to act upon the liver. The propriety of recognizing “bilious pneumonia” as a variety of the disease may fairly be questioned.

4. Pneumonia occurs as a complication, or secondary affection, in the course of other diseases. Its occurrence in rubeola is not unfrequent. It is apt to occur in the continued fevers, typhus and typhoid. It adds much to the danger in these diseases. An important distinction is involved in typhus or typhoid fever, complicated with pneumonia, as compared with the so-called typhoid pneumonia. In the one case, the primary disease is the continued fever, the pneumonia being developed secondarily; in the other case, the pneumonia is the primary disease, certain symptoms becoming developed which denote what is commonly known as the typhoid condition.

5. The general and local symptoms accompanying pneumonia, when primary and uncomplicated, differ widely in different cases, and in these differences have originated certain varieties of the disease generally recognized by authors. When accompanied by high febrile movement—a full, hard pulse, and a hot skin—it has been called sthenic and frank pneumonia. Examples of this variety are oftenest seen in young, robust subjects, residing in healthy rural situations. When, on the other hand, the phenomena belonging to symptomatic fever are not present in a marked degree, the pulse and skin denoting diminished power of the circulation, the disease is said to be asthenic. In each of these varieties the local affection, so far as it can be appreciated by the physical signs during life, or by examination after death, may be the same. It is an expression of a well-known pathological fact, applicable alike to this and other inflammatory affections, to say that, with a similar amount of inflammation, different cases differ extremely as regards the disturbance of the system. The system appears to tolerate differently the same affection in different cases. And it is obvious that the management must have reference to the condition of the system quite as much as, if not, indeed, much more than, to the local affection. In cases presenting passive delirium and adynamia, the disease is called typhoid pneumonia. Here, too, the gravity and danger relate not so much to the local affection as to the general condition; and here, also, the treatment is to be governed

more by the general symptoms than by the degree or extent of the inflammation.

6. The rapidity with which the exudation takes place in pneumonia, sufficiently to solidify the affected portion of lung, is of importance with reference to treatment. Different cases differ in this regard; but it is not unusual to find the physical signs of complete or considerable solidification (bronchial respiration and bronchophony) within twenty-four hours after the date of the attack, and frequently this occurs in the course of forty-eight hours. Hence, were it possible to prevent this result, it must be by therapeutical measures which act with a promptness commensurate with the rapidity of the exudation.

7. Other important facts relate to the removal of the exudation. It is removed chiefly, or exclusively, by absorption, not by expectoration. The source of the expectoration in pneumonia is mostly, if not entirely, from coexisting circumscribed bronchitis. This fact has an obvious bearing on the use of remedies called expectorants, or, on the other hand, on the use of remedies which are supposed to interfere with expectoration. It is well known that pneumonia may be completely latent so far as cough and expectoration are concerned. The removal of the exudation may go on with great rapidity, even when no active measures of treatment are employed. In this respect cases differ greatly. It is certain that, before the natural course of this disease had been observed, the more or less rapid disappearance of solidification, occurring naturally, was often attributed to remedies supposed to act as sorbefacients. The complete removal of the exudation, in favorable cases, leaving the pulmonary structure intact, is an important as well as highly interesting fact. The tendency to run into a chronic form, as is well known, does not belong to this disease. It is rare for it to eventuate in the third stage, or the stage of purulent infiltration, even in fatal cases. Abscess and gangrene are also results extremely infrequent. With a few exceptions, it may be said that resolution of the affected lung is sure to take place if the life of the patient be sufficiently prolonged. This fact has a very important bearing on the indications for treatment.

8 In the majority of the cases in which pneumonia proves fatal, the mode of dying is by asthenia, rather than by apnoea. The patient rarely dies in consequence of the extent to which the respiratory function is compromised. It is not unusual to observe complete solidification of an entire lung with very little embarrassment of breathing. The fatal termination is much oftener due to failure of the powers of life. This is true of the different varieties of the disease, and of cases in which the disease is complicated or uncomplicated.

The indications for treatment in cases of pneumonia must have regard to the stage of the disease. When patients are seen in the first stage, *i. e.*, prior to solidification of the affected lobe, important objects of treatment, if attainable, doubtless are the limitation of the inflammation, the prevention of exudation, and the restriction of the local affection to the lobe first invaded—in other words, the arrest of

the disease. Are these objects attainable? With our present knowledge, this question resolves itself into another, viz.: Will the antiphlogistic method of treatment, so called, of which blood-letting is the most prominent measure, control the disease? Clinical experience certainly warrants the assertion that this method of treatment cannot be relied upon for effecting the objects just named. If this method ever succeeds in arresting pneumonia, the chance of success in any case is too small to justify its employment whenever it comes into conflict with other indications, or, in other words, whenever it will be likely to do harm if it do not succeed. Abortive measures, other than those commonly known as antiphlogistic, do not require notice, and, indeed, there are none, at the present moment, before the profession.

Putting aside arrest of the disease as an object of treatment in the first stage, the inquiry arises, May not active measures, in this stage, so influence the disease as to diminish its intensity, and thereby the danger, aiding the patient to pass through it more safely and comfortably, if not more quickly, than if the measures were not employed; and will not blood-letting conduce to these desirable ends? A candid review of the discussions which have taken place within the last few years respecting blood-letting in pneumonia, together with the results of clinical experience, can hardly fail to lead to the conviction that, employed indiscriminately, it will do much more harm than good. This, it must be admitted, may be true, and yet blood-letting be useful in certain cases. Its usefulness is limited to cases characterized by high febrile movement, the patients being robust or of a full habit, and, of course, the disease not advanced to the second stage, when a pound or more of solid matter has been withdrawn from the blood to constitute the solidifying deposit. The abstraction of blood, if the pulse be strong, the skin hot, and the pain severe, with more or less dyspnoea, will undoubtedly afford relief, and sometimes, perhaps, place the patient in a better condition than if no active treatment had been resorted to. But even in the cases to which blood-letting is to be restricted, if employed at all, may not other measures be substituted which will accomplish the same ends, without the spoliative effects of that remedy? We think this question may generally be answered in the affirmative. Blood-letting in these cases is not so much a curative as a palliative remedy. It is addressed, not directly to the local affection, but to the symptomatic febrile movement, and can only influence the local affection indirectly in so far as the latter is intensified by the former. Now, the febrile movement may be not less efficiently restrained by saline purgatives and by the nauseant and arterial sedatives, of which antimony and the veratrum viride may be named as the most reliable. The salines deplete without the loss of the blood-corpuscles, or spoliation, and the sedative remedies diminish the frequency and force of the heart's action. These remedies, then, may take the place of blood-letting certainly in the great majority of the cases in which this measure would be admissible if substitutes were not to be found.

Antimonial preparations and the *veratrum viride* are potent remedies which are only to be employed to meet certain indications. They may do much harm if injudiciously or indiscriminately employed. They are indicated in cases in which the pneumonia is said to be frank or sthenic. They are to be given with great circumspection when, from the previous health, the constitution of the patient, or other circumstances, danger is to be anticipated from failure of the vital powers. They are never to be carried to the extent of producing marked depressing effects. The benefit to be obtained from them can be secured without these effects. They are not given to influence the local affection directly, but only through their action upon the circulation. They are imperatively contra-indicated whenever the action of the heart, as represented by the strength of the pulse, denotes a tendency to failure of the powers of life. Given, or persisted in, under these circumstances, they will contribute to the danger of death by asthenia.

Relief of the acute pleuritic pain which belongs, in some cases, to the first stage of pneumonia, is an object of treatment. Restraining the movements of the affected side, pain induces fatigue, from the increased frequency of the respirations, and conduces to suffering from dyspnoea. Local measures will do much towards this object. A considerable number of dry cups is an efficient measure. Wet cupping should be limited to cases in which the loss of the blood abstracted by this mode will be well borne.

Stupes with water only, or with some stimulating application, such as the spirits of turpentine, often afford marked relief. The oiled muslin jacket contributes to comfort by keeping the surface of the chest moistened with perspiration, and, if a flannel covering be added, all the advantages of a poultice, or the water-dressing, are secured. It is hardly necessary to say that blisters are inadmissible, certainly in this stage. There need be no reluctance in prescribing opium in this stage, for the relief of pain. The value of opium for other objects will claim attention presently.

If the phenomena of intermittent fever are developed, quinia should be given promptly and in efficient doses. The paroxysms should be arrested as speedily as possible. The patient may be placed in great danger by their repetition. The existence of the pneumonia and the degree of symptomatic febrile movement in no wise conflict with this important indication; indeed, so far from conflicting with it, the sedative influence of full doses of quinia may be useful, aside from the arrest of the paroxysms. In a malarious region, or if the patient have been subject to attacks of intermittent fever, it is judicious to forestall the possible development of the latter affection by moderate doses of quinia. It is a good rule, in such cases, to commence at once with the use of this remedy, irrespective of the liability to the occurrence of intermittent paroxysms. The malarious cachexia impairs the power of resisting the disease; hence its greater fatality in malarious regions, even when uncomplicated with intermitting fever.

(To be concluded in our next.)

REVIEWS AND BIBLIOGRAPHY.

Notes on the Surgery of the War in the Crimea, with Remarks on the Treatment of Gunshot Wounds. By GEORGE H. B. MACLEOD, M.D., F.R.C.S., Surgeon to the General Hospital in Camp before Sebastopol, etc. Philadelphia: J. B. Lippincott & Co. 1862.

Campagne d'Italie de 1859. Lettres Médico-chirurgicales, écrites du Grand Quartier Général de l'Armée. Par le Docteur A. BERTHERAND, Médecin Principal de Première Classe, etc., etc. Paris, chez J. B. Baillière et Victor Masson. 1860.

(The Italian Campaign of 1859. Medico-Chirurgical Letters from General Head-Quarters. By Doctor A. BERTHERAND, Principal Medical Officer of the First Class, etc.)

The two last great wars of Europe give us, in these two little volumes, their results—as far, at least, as they have been elaborated—with regard to that subject which to-day most deeply interests every American surgeon, as it most deeply concerns every American soldier—the care of the wounded. After briefly glancing at the comparative as well as the absolute value of the two works, let us endeavor to draw from them a few practical deductions, which may be of service to any of us who are called upon to serve our country in the tented field, but under the tent of the ambulance; members of the more unobtrusive, but not less glorious or noble, army of non-combatants.

Both books are just what they claim to be. The English work consists of notes, annotations on the medical and surgical history of the war generally, worked out with a good deal of care, and at a sufficient period of time subsequent to the occurrences which they illustrate, to give a comprehensive view of the entire field which they cover. They are arranged methodically, beginning, somewhat unnecessarily, as far back as the days of the Argonauts, when the Crimea was peopled with “Gorgons and Hydras, and Chimeras dire,” and giving its history, authentic and unauthentic. Its climate, geology, Flora, and Fauna, including the genus homo, are under review in an easy, pleasant style, and with special reference to the effect which, singly or combined, they might exert on an army of occupation. The following brief quotation will show the reader that the author is no professional plodder, without an eye to the natural beauties which at times surround him, (p. 26:)

“Autumn again was charming. The coolness of the mornings and evenings, the tempered heat of the mid-day sun, and the genial showers, rendered the climate delightful; while the beauties of sun

and shade, which played in such variegated richness over the broken mountains, and the brilliant sunsets, which lit up the many peaks with their purple splendor, and threw their golden shafts far over the shining surface of the calm sea, gave camp-life, at that season, a charm to which we had previously been entire strangers."

The order of the Letters from Italy, on the other hand, is simply chronological. Events are recorded just as they transpired; and while they contain much that is profitable, their chief charm lies in fresh, vivid pictures which they give of ambulance life. While reading them, one almost hears the groans of the wounded mingling with the cannon's roar, and sees the aisles of the old cathedrals paved with the thick-strewn beds of maimed and dying soldiers; while the flickering lanterns of the surgeons and nurses only serve to heighten the gloom of the vaulted roofs. We are hurried at once, without prelude or preface, to the field of battle, and Melegnano, Magenta, and bloody Solferino pass in rapid succession before our bewildered gaze, with their hecatombs of victims, and their crowded clinics.

We shall therefore conform our review of both to the order followed by the former, noticing briefly their points of unanimity and of disagreement.

There is nothing which so forcibly and painfully impresses the reader, in the preliminary part of Dr. Macleod's work, as his description of the fearful sufferings which the British troops endured from lack of food and clothing. Nothing in the history of our own campaign, even its earlier part, when so many thousand men were so hastily put in the field, can begin to compare with it; and no one, we think, can fail to be struck with the immense energy which has been displayed by our own Government, in equipping and feeding an army which numbers more than twice as many thousands as that of the English did hundreds, although at the outset our resources were so greatly inferior to theirs. The following picture is in strong contrast with that just given:

"Day after day passed in severe bodily exertion and anxious watching—one moment digging laboriously in extending the approaches, and the next with arms in hand repelling the assaulting enemy; almost always wet; exposed without cover to the drenching rain and soaking snow, the keen frost and biting wind; standing for days in wet mud; constantly either unnaturally excited or depressed; ever in danger, and without hope of a change; their dirty, humid clothes in rags—their bodies covered with loathsome vermin, which seemed to grow out of their very flesh; no comforts in their wind-pierced

tents on the bleak plateau; no fires, unless, weary and foot-sore as they were, they dug beneath the snow-covered sod for wet roots wherewith to kindle a feeble and tantalizing blaze; without food till, after hours of persevering exertion, they managed to half cook their unpalatable ration over their winking fire; huddled into a crowded tent, to pass the night in a close, noisome atmosphere, on the oozy ground—covered by the same blanket which protected them in the wet and muddy trenches; longing for the morning, though its early dawn was signaled by the bugle-sound, which called them to a renewal of that dread task whose severity made them yet again sigh, ‘Would to God it were night!’”—(P. 41.)

The heart sickens at the picture. But it could not be dispensed with. Nothing else would have accounted for the fearful mortality of the siege.

Both of our authors bear cheerful testimony to the efficiency of female nurses, and the gratefulness of woman’s tender care to the sick and wounded amid the discomforts of the camp.

“I believe that Miss Nightingale has decided the question,” says Dr. Macleod; and Dr. Bertherand speaks with equal emphasis of the brave, unflinching devotion, and the indescribable consolations, of the volunteer nurses of Milan: those “auxiliary legions of pious devotion”—“guardian-angels of the soldiers’ couch of pain.”

The campaign in Bulgaria seems to have been the worst possible preparation for the work of the trenches. “Cholera, diarrhœa, dysentery, typhus and typhoid fevers, the results of exposure, irregular and deficient rationing, and the use of adulterated liquors, fearfully diminished and weakened the ranks, ere the army encamped before Sebastopol. Scurvy, too, was a most destructive agent, and that although a full supply of lime-juice was almost within reach, at Bala-klava.”

We are a little surprised to learn that “the majority of the recruits who joined the army early in 1855 were far from being well chosen, and that many of them were raw boys, ill conditioned, below the standard age, undeveloped in body, unconfirmed in constitution, and hence without stamina or powers of endurance.” Notwithstanding the haste with which its legions have been gathered, we believe, indeed we know from personal inspection that, while there may be many instances similar to these in our own army, as a rule its ranks are composed of well-developed men, equal to any degree of muscular exertion.

With regard to the new conical balls now used, the author is con-

vinced that "the severity of the primary action on the part struck, and especially the aggravated evils which follow their wounds, combined to exercise a most prejudicial influence on the surgery of the war." "Immense comminution of bone," he adds, "has been their most prominent effect," while "the amount of laceration of the soft parts seems to depend on the distance at which the missile is fired." This destruction of the bone necessitates amputation, and hence increases the mortality.

Bertherand views the matter somewhat differently. After establishing it to his own satisfaction that the flight of these projectiles is endwise, he adds: "This fact leads me to regard as entirely too absolute the assertion of the increased relative severity of the wounds made by them, as compared with those produced by round balls." While he feels certain that they cause less laceration of the soft parts, he says with regard to bones, "1st. The point of conical projectiles striking the spongy portion of a bone has more chances of penetrating without splintering; the probabilities, on the other hand, are for a considerable number of large fragments, if it is a dense portion which is struck." The orifice of penetration is smaller, that of exit probably larger.

Macleod does not believe that "the conical ball, with its immense force of propulsion, could be split" upon a prominence of bone, as the round ball frequently is. Bertherand believes that they are about equally liable to it, and "to resolve all doubts upon the subject, most preciously preserves such a ball cut in two nearly equal halves, from the summit to the base, by the crest of the left tibia, on which he found it clasped."

Both agree in saying that a conical ball is not so likely to be turned from its course by a dense aponeurosis, as a round ball.

From the impressions produced upon the mind of the English surgeon, we think the inference must be drawn that the bullets of the Russians were heavier, and their arms of greater range, than those of the Austrians. On the greater difficulty of extracting the conical ball both are agreed, and Macleod insists, with much earnestness, upon the imperative necessity for removing all foreign bodies, but especially balls, immediately after the receipt of the injury.

Water dressings and irrigations are recommended in the French as well as the English work.

In speaking of the deceptive appearances often produced by gunshot wounds, Bertherand gives the following, which we think rather in advance of anything related by Macleod: "An officer presents

three wounds, placed one above another, in a line perpendicular to the fold of the left groin; two above Poupart's ligament, and one below. His own conviction is, that he received three shots. But we have no grave symptom pointing to abdominal lésion, nor can the finger or the sound penetrate that cavity, and yet the skin is extensively and deeply destroyed; these are no mere contusions. But Mr. X. is very fat; at the moment when the ball struck him he was bending forward. May not the projectile have perforated the base of a thick fold of abdominal integument before burying itself in the upper portion of the thigh? Placing him in the assumed posture, the orifices at once take their respective positions so exactly, that my forefinger penetrates them all at once with the greatest facility."

The two surgeons are unanimous in their estimate of the value of chloroform in military practice, and the perfect safety which attends its administration. Speaking of the operations after Solferino, Bertherand tells us that, "although administered indiscriminately in every operation, it did not give rise to the slightest accident." Macleod cites the testimony of Baudens, that the "French had no fatal accident to deplore from its use, although during the Eastern campaign it was employed thirty thousand times or more," and proves most conclusively that there was only one instance in which death was chargeable to its agency in the English army. The former author notices a striking contrast between the effects produced by the anæsthetic on the Austrians, depressed by defeat and fear, and the French, elated by victory; the one class succumbing instantly, as if struck by lightning, while the others were stimulated to the most violent muscular contractions. The latter "most conscientiously believes that its use in the army *directly saved very many lives*." He also notices the somewhat singular fact, if it be one, as first observed by Deputy-Inspector-General Taylor, that "chloroform appears to act more efficiently when administered in the open air."

In considering the subject of hæmorrhage, the same author observes, with much justice, "that our language would gain greatly in precision if we divided it into three periods instead of two. 1st. *Primary*, occurring within twenty-four hours after the wound, and the result of the mechanical lesion. 2d. *Intermediary*, occurring from twenty-four hours to ten days after, and due to sloughing. 3d. *Secondary*, properly so called, occurring after the tenth day, and the result of a morbid ulcerative process."

Referring to a nearly fatal case of hæmorrhage, Bertherand insists, and we think very properly, on the necessity of regulating our ligation

of arteries, not by the jets of blood, but by an exact anatomical acquaintance with the principal vessels of the region.

Tetanus appears not to have been a very frequent complication in the English army, but when occurring, was, as usual, almost universally fatal. After Solferino, on the contrary, there were thirty cases, all of which terminated fatally. M. Bertherand attributes their occurrence in great measure to the chilly, damp air of the churches, in which many of the wounded were temporarily laid, it having manifested itself almost exclusively among those who were thus disposed of. One case he mentions as having been cured by the exhibition of the curare, in the hands of M. Vella, at Turin. The wound having been laid open, the curare was applied to its surface in solution, as well as introduced into the system by the endermic method, always with the result of quieting the paroxysms and giving the patient the control of his muscles. The case was a violent one, and when this treatment was commenced, threatened asphyxia.

Our readers will remember the announcement, during the Italian Campaign, of the discovery of a disinfecting powder by some surgeons of Paris, which, placed upon gangrenous or ill-conditioned wounds, was to restore the surfaces almost invariably, and as if by magic, to a healthy condition. M. Bertherand gives a very careful analysis of the results obtained by its use, and is disposed to attribute but little efficacy to it. It is known as the mixture of MM. Corne and Demeaux, and consists of certain proportions of plaster of Paris and coal-tar. He has seen it act as an unyielding barrier to the escape of pus, and thus cause the most excruciating pain. He considers that, far from destroying the *sui generis* odor of gangrene at its source, it simply introduces an obturator between the generating surface and the nose of the observer, and that it has no capacity whatever for the absorption of pus. In many instances it appeared to him to act rather as an irritant. The beneficial results which apparently followed its employment at Milan he refers to the superior hygienic conditions in which those were placed who were undergoing the experiments and the care with which they were watched.

In the English camp, fuming nitric acid as an escharotic, freely applied to the healthy as well as the diseased surface, was relied upon in the external treatment of these cases of hospital gangrene, which, however, were not numerous, and tonics, especially iron, were liberally administered with the best results.

In regard to mortification from exposure to cold, Macleod says: "Complete non-interference during every stage of treatment, the re-

moval of parts only when quite disjointed, proved the best line of procedure."

The trephine was used twenty-eight times in the British service in the Crimea, and of these cases twenty-four ended fatally. Bertherand, on the other hand, mentions four cases as occurring under his immediate notice, three of which proved successful.

On the question of the indications for its use, the English surgeon says, (p. 170:) "Simple contusion, without fracture or depression, caused the old surgeons to 'set on the large crown' of a trephine, in order to prevent further danger. Fractures, although not accompanied by depression or any other untoward symptom, called for the trephine in the practice of the Pott school; while many even now would operate to cure the local pain which so often remains persistent at the place of injury. Other surgeons, again, discarding and condemning all this, say we should trephine only when there is depression; but the amount of depression which demands it, each interprets according to his own fancy. None knows so well as the army surgeon how very considerable a depression may exist, especially at some parts of the head, without any injury to the brain; nor how innumerable are the cases in which great depression has been present, without causing harm at any subsequent period of the patient's life."

And in speaking of the subsequent care of wounds of the head, he continues, (p. 188:) "Hardly less important than the immediate treatment of gunshot wounds of the head, is their after-management. No class of cases requires more lengthened and careful supervision. Relapses may occur long after the patient is apparently beyond danger; and from the most insignificant causes—of which, perhaps, irregularities in food, the use of alcoholic stimuli, and retained evacuations occupy the foreground—a chronic inflammatory condition of the membranes is apt to become established, which is no less difficult to manage than dangerous in its ultimate results. Very many cases are on record in which men with balls imbedded in the brain have apparently recovered completely, but have suddenly fallen down dead when they had got drunk or excited."

Passing over the chapters on wounds of the face, chest, and abdomen, which present nothing particularly new beyond the recital of a number of very interesting cases, we come to the important questions of compound and comminuted fractures and amputations.

The relative advantages of primary and secondary amputations, the most important question in the whole domain of military surgery, is

quite fully discussed by both authors, and their results do not differ. The one says, (p. 319:)

"To military surgeons the question of primary or secondary amputation is a settled one. The experience of every war has more and more confirmed the advantages of early operation, and that in the Crimea has not disturbed the rule; in fact, later observation would lead us to go further, and in place of merely advocating interference within twenty-four hours, the prevailing idea at present would be better expressed by saying that every hour 'the humane operation' is delayed diminishes the chances of a favorable issue."

And the other gives the following figures prepared by M. Sonrier, who justly observes that they speak more loudly than any arguments. "The ten operations performed *immediately* at Solferino were followed by nine cures.

"Arranging the operations in periods of fifteen days, we have the following results:

Operations.	Successful.	Unsuccessful.
From June 24th to July 1st, (4 grave)....	12	5
“ July 1st “ 15th, (11 id.).....	14	16
“ “ 15th “ 31st, (7 id.).....	2	12
“ Aug. 1st to Aug. 20th, (2 id.).....	3	2
	31	35”

Attempts to preserve the limbs in cases of compound fractures, especially of the thigh, were made in both armies, and with like discouraging results. Macleod says, (p. 249:)

"It can hardly be doubted that the great striving after conservatism, which influenced all the surgeons of our army, was one main cause of that mortality which attended these injuries. We were not prepared to believe how hopeless they were, till the unwelcome truth was forced upon us by an ever-recurring experience. We were disposed to judge of compound fractures by gunshot as we would of accidents, similar at least in name, seen in civil life. Full of the promise of the schools, we would not admit that any injury, apparently so slight, could withstand the assiduities of a wise conservatism. In trying, however, to save limbs, we lost many lives, thus fulfilling the prophecy of one of the greatest surgeons. Cases of promising appearance were reserved for the trial—the very cases, in fact, which would have made the best recoveries if operated upon early, and the inevitable amputation was delayed till the patient's constitution had become so depressed as to be beyond reaction." While Bertherand, who early in his campaign looked forward with much and apparently well-founded hope to the establishment of the possibility of the treat-

ment of these fractures, and the procurement of solid union, concludes his discussion of the subject as follows: "The surgeon too often hesitates, disarmed in the presence of considerations of the personal position, the age, the shattered hopes of his patient, and sees a man die with four limbs who might have lived with three." "Who can say that the successes obtained, numerically so insignificant as compared with the grand total of fractures of the thigh by gunshot, have not been bought at the price of the most painful sacrifices?"

In summing up, as well as he was able at that early date to do so, the results of the surgery of the war, Dr. B. says: "In the absence of accurate and full figures as to general results, I give a few incomplete statements, which, however, will serve to indicate the general situation, and to corroborate the presumption of satisfactory averages. One of these refers to the most unsparing of all amputations, those of the thigh. On the 9th of August last, M. Gherini and his colleagues could count seven successful cases out of ten operated on at San-Filippo." This is certainly an unprecedented success. The table given by Macleod of the average mortality in a number of modern wars never makes it less than 51 per cent.; and the general average is about 70. That of the Crimea was about 64 per cent. Dr. B. continues: "After Solferino, more than 17,000 French, 14,000 Italians, and about 1,500 Austrians (say 33,000 wounded and sick) entered the hospitals of Brescia; fourteen consecutive amputations were performed. From the 6th of June until the present date, (Aug. 17th,) a period which comprises the battles of Magenta, Solferino, and Melegnano, Milan received in round numbers 21,000 French, 6,000 Italians, 7,000 Austrians; total 34,000, wounded or sick. Of these 29,000 have left cured, or been transferred as convalescent, while 4,000 are still under treatment. The mortality has not risen above 1,400 individuals, say a proportion of less than four to the hundred." The final results of the mortality of the wounded of the English army in the Crimea give an average of about seventeen to the hundred, and the mortality among the sick was scarcely less. The hygienic conditions of the two armies, however, and the nature of their respective duties, together especially with the brevity of the Italian campaign, make anything like a comparison of results altogether unfair and deceptive.

While both these works well repay the medical reader for their perusal, we have read them with peculiar satisfaction, from the fact that they have shown us in very many points that what we have regarded as causes of opprobrium both to the combatant, the medical

and the purveying departments of our armies, have existed in an equal or greater degree in the attempts of the two greatest military powers of Europe to place large armies in the field within the past ten years. Let us thank God that, dark as the picture of the condition of our hastily gathered levies may have been in the earlier part of the campaign, it was brightness, cheer, and comfort as compared with that drawn by Macleod and every other observer of the *avoidable* miseries of the brave soldiers of her Gracious Majesty the Queen, in Bulgaria and before Sebastopol. If the assistance of 280 Italian physicians was found essential to the care of the French wounded, in addition to their own medical staff; and if, as M. Bertherand tells us, that number could not have been obtained from the French institutions, is it strange that, after our battles, there has been some lack of medical attendance to complain of? If, even with all the immense military stores of France, which have been accumulating ever since Napoleon took the reins of government, the Zouaves were still obliged to bivouac without blankets, and were attacked with intermittents in consequence, is it remarkable that, in our utterly unprepared condition, we were unable properly to clothe all of our patriot soldiers?

And lastly, if trained French troops, whose valor is undoubted, full of the spirit of a glorious victory, could be thrown into so complete a panic by the "*hallucinations of hired wagoners*," that, as Bertherand informs us, it was communicated even to the wounded in the hospital of San-Luiggi, at Castiglione, who, tearing the splints and bandages from their shattered limbs, dragged themselves to the doors of the wards, seeking to fly, without knowing whither or how, can we wonder that a similar cause produced a similar result among a portion of our raw recruits, worn out by hunger and an exhausting march? Macleod's work is reprinted from the English edition, in Lippincott's usual neat and attractive style, and deserves, from its appearance as well as its value, a generous reception from the medical public. Bertherand's is still untranslated, but we trust that it will not be long before some enterprising publisher gives it to American readers.



Clinical Lectures on the Diseases of Women and Children. By GUNNING S. BEDFORD, A.M., M.D., Professor of Obstetrics, the Diseases of Women and Children, and Clinical Obstetrics in the University of New York; Author of the "Principles and Practice of Obstetrics." ("Medicus curat morbos, natura sanat."—*Hippocrates*.) Seventh Edition, carefully revised. New York: William Wood, 389 Broadway. 1862. 8vo, pp. 653.

We wrote a notice of "Bedford's Women and Children," it seems to us, but a little while ago. On that occasion we referred to the fifth issue, and now, we have already, the seventh presented to us. There were at that time 604 pages of progeny, while now, we have 653. They have been scattered in French and German dresses, as well as in their native garb, over all the civilized portions of the world, and we have rarely seen more numerous or more favorable notices of any book in the journals of the various countries, than of the unpretending and colloquial yet strictly clinical and practical volume now once more announced. We think we can take for granted, that our readers are aware both of its existence and its character, and abstain from presenting a detailed review, which would but necessitate the repetition of laudatory encomiums it has elicited everywhere. Those who have not yet had access to the work can do no better than get the "seventh revised," and ascertain for themselves the precise amount of benefit that will accrue to their women-and-children patients from the treatment it inculcates.

The light leather binding of the copy before us, we do not regard as being as elegant or nearly so desirable for use as that of the author's "Obstetrics," issued recently by the same publishing house.

EDITORIAL AND MISCELLANEOUS.

— THE ANNUAL MEETING OF THE STATE MEDICAL SOCIETY, held on the 4th, 5th, and 6th days of February, was the fifty-fifth session of this important body. It was not inferior to former sessions, in numbers or in interest. The introductory address of Dr. E. H. PARKER, the President, commencing with a feeling tribute to the memory of his predecessor, Dr. David J. Jones, was devoted to the new importance which Military Surgery has acquired in consequence of the events of the past year, the duties of Military Surgeons, and of medical bodies in their relations to Military Surgeons. The following quotation ex-

presses so well what has always been our opinion with regard to the relative value of hygiene and medication, and operative surgery, that we are induced to give it literally:

“But it is to be borne in mind that the medical officer of the army, so far as he acts as a surgeon proper, is almost a specialist, while a large share of his duties are purely medical. No regiment is constantly going into action, and the shafts of disease are far more fatal to soldiers than the bullets of the enemy. As a defence against the latter, the engineer is required to throw up his earth-works; and it is equally the duty of the medical officer to see to it that the men under his charge are as far as possible protected from the former. Prophylaxis, whether it be by using quinine to prevent malarial disease, or by compelling attention to the sinks and other sources of effluvia to avoid camp dysentery; or by seeing to it that cleanliness of the person is enforced as an especial defence against the invasion of typhoid diseases—or by a careful supervision of the means and modes of cooking—prophylaxis, I say, is a far more important study than that of the latest way of doing an amputation. The character and mode of the operation required from a gunshot wound is usually settled by the ball that inflicts it, and that with a profound disregard of the theories and dogmas of the schools, whether they be English or French, German or Russian, compelling one to take his flap, and to separate the bones when he can, not when he would.”

With reference to the matter of the responsibility of military surgeons for the wounded taken prisoners by the enemy, he makes these timely remarks:

“The duty a military surgeon owes to the wounded when a battle is lost, is a topic of interest. I am aware that much may be said concerning the claims that the remainder of his regiment may have upon him, to justify him in leaving them to the care of the victors. But it is more in accordance with the spirit of our profession, which is never deficient in bravery or self-devotion to the good of others, that if the wounded are in any numbers the Surgeon should remain with them. The Surgeons of the victors usually have as much as they can do among their own troops, and if any are neglected it naturally is the prisoners. With the necessary confinement, trifling neglects become serious, and the result of an operation may be entirely different when advised and performed by a known and tried friend, or an avowed enemy.

“The very touch of a friendly hand is to a sick prisoner often more than medicine. To all of these, it seems to me, the soldier has a

claim, and if he knows he may expect such devotion from his Surgeon, he will fight with less hesitation. These principles hold, of course, only in large engagements, when there are many wounded on both sides.

"At the battle known as that of Bull Run, large numbers of our wounded were collected in a church, and a number of Surgeons of our army were present with them. There was ample time for all to have returned with their forces. A few so improved their time, but the majority remained, and for months suffered all the dangers as well as inconveniences of prison life. True as the latter were to all the teachings of our profession, when to be true was not a slight thing, it seems to me proper that this Society, representing as it does the profession of our State, should mark this conduct with its approbation. I would urge upon you some such expression of their opinion, as may make those gentlemen, whether from our own or other States, feel that their heroism was noticed and applauded by their professional brethren."

The following were the Papers read before the Society:

"On Reflex Paraplegia as a Sequel of Diphtheria." By Dr. Bissell, of Utica.

"On Conservative Surgery." By Dr. S. D. Willard, of Albany; with a List of the Surgeons and Assistant Surgeons of the Volunteer Army of New York.

"On the Medical Provision of Railroads as a Humanitarian Measure, as well as a Source of Economy to Companies." By Dr. Edmund Arnold, of Yonkers.

"On Dislocation into the Ischiatic Notch, with Autopsy." By Dr. Hutchinson, of Kings County.

"Synopsis of a Case of Peritonitis in a Child." By Dr. Downs, of New York.

"On the Medico-Legal Points in a Case of Suspected Murder." By Dr. John Swinburne, of Albany.

"Description of a New Instrument for the Treatment of Stricture of the Urethra." By Dr. J. M. Minor, of Kings County.

"On a New Instrument for removing Foreign Bodies from the Trachea and Œsophagus." By Dr. Burge, of Kings County.

"On Proper Points for Amputation." By Dr. Bly, of Rochester.

The following "Pathological Specimens" were presented:

Dr. J. C. Finnell, President of the New York Pathological Society, presented—

"A Case of Anchylosis of the Ankle-Joint, following fracture, with interstitial absorption of the bones of the Tarsus."

"A Compound Fracture of the Skull, with Impaction of a fragment of the brick, which caused the injury."

The Skeleton of a Monster.

Dr. Porter presented for Dr. Boulware, of Albany, a specimen of Wound of the Trachea, through the Crico-thyroid membrane.

Dr. M. M. Marsh, of Onondaga, presented a specimen of Cirrhosis of the Liver, with duplicate Spleen.

Dr. Quackenbush, of Albany, presented, for Dr. Van Dyck, a Monster in which there was extrusion of the Thoracic and Abdominal Viscera.

Reports were offered upon the following subjects:

"Report of a Special Committee on the United States Drug Law."

Read for Dr. F. H. Hamilton by Dr. Squibb, of Brooklyn.

Report of Dr. E. R. Squibb, as representative of the Society in the Committee of Revision and Publication of the United States Pharmacopœia.

The only important Resolutions adopted were those of Dr. Mason, of Kings Co., in support of the Metropolitan Health Bill, as follows:

Whereas, On the principle of self-preservation being the first law of nature, it is the paramount duty of the State to promote by all possible means the preservation of the health and lives of the people, and their protection against the causes of disease which continually surround them, especially in connection with the conditions of civilization; and whereas, in the opinion of this Society, the health laws of this State have not kept pace with the rapid modern progress of sanitary science, and Government fails to enforce many well-known means by which disease and death may be averted, and longevity and population increased: Therefore,

Resolved, That the bill now before the Legislature, known as the Metropolitan Health Bill, meets with the cordial approval of the State Medical Society, as a measure which, though partial in its application to one section of the State, is a step in the right direction, and should be enacted into a law without delay.

Resolved, That the foregoing preamble and resolution be authenticated by the officers of this Society, and transmitted to the two Houses of Legislature.

Of Dr. Brinsmade, of Troy:

Resolved, That a Committee of five be appointed to draft a Sanitary Code for the State of New York, and submit the same to this Society for its consideration, at its next annual meeting.

Of Dr. Van Hœvenburgh, of Ulster:

Resolved, That a Committee of five be appointed by the Chair to see Dr. Freer, Chairman of the Senate Committee on Medical Societies, as also the Medical Committee of the House, and inquire into the provisions of the bill incorporating the State Homœopathic Medical Society, and report to this Society what action is necessary in the premises.

Of Dr. Shrady, of New York, Chairman of Committee on Medical Provision for Railroads:

Whereas, This Society has heard that a measure is about being introduced into the Senate, of which an essential feature is thorough medical provision for railroads; and whereas, we believe that much loss of life and limb results from want of such provision: Therefore,

Resolved, That we hail with satisfaction the introduction of any plans calculated to secure so desirable an end.

Resolved, That a copy of the foregoing be forwarded to Senator Smith, of Kings County, the gentleman who had given notice to the Senate of the introduction of such a measure.

And of Dr. Coates:

Whereas, It becomes us, as dependent upon the All-wise Being for guidance in all our transactions : Therefore,

Resolved, That hereafter the proceedings of our annual meeting be inaugurated with prayer, and that the Secretary be requested to invite the attendance of some clergyman to act as chaplain.

The following named gentlemen were elected as officers for the ensuing year: *President*, Thomas Hun, of Albany; *Vice-President*, D. P. Bissell, of Utica; *Secretary*, S. D. Willard, of Albany; *Treasurer*, J. V. P. Quackenbush, of Albany; *Committee on Publications*, Thomas Hun, S. D. Willard, and Howard Townsend; for *Censors*, *Southern District*, W. Govan, Joel Foster, and E. Harris; *Eastern District*, B. P. Staats, J. W. Blatchford, and P. McNaughton; *Middle District*, J. S. Sprague, C. B. Coventry, and A. P. Doolittle; *Western District*, Alex. Thompson, H. W. Dean, and E. Hall.

The Annual Address was delivered by the President in the Assembly Chamber, on Wednesday evening. The subject was the "Dignity of the Medical Profession."

We cannot but regard it as a matter of regret that the committees appointed to consider the recommendations of the Academy of Medicine, and of the Oneida County Society, on the subject of the introduction of homœopathy into the national army, decided adversely to any action upon the subject. We think that no pains should be spared to show the Government that that profession which has so lavishly furnished its members on its first demand, is jealous of its honor, and that the elevation of quackery by legislative action to a level with its own science, and the introduction of ignorant pretenders or hare-brained enthusiasts into the service as the equals of its own members, will be resented and resisted by it to the last. It will not do to trust too much to the magnanimity or the good sense of our law-givers, unaided by professional advice and the weight of enlightened public opinion.

A Philadelphia contemporary justly styles the State Society of New York the most important medical association in the country. Its immediate connection with the Legislature of the State, the influence which it thus acquires in all legislation on sanitary matters, the weight given to its transactions by their publication as Government documents, and the extensive circulation thus assured them, all combine to give it

a standing and character which even the National Association does not possess. But the profession in New York City, at least that portion of it which is represented by the Academy of Medicine, "does not see it." So it waits until a few days before the meeting, and then elects its delegates without the slightest regard to the fact of their want of preparation, and of course leaving them no time to prepare. And hence it results, that while most interesting and instructive papers and specimens are presented by members representing the towns which we delight to call provincial, and even the country districts, the principal society of this great City of New York, with its thousands of physicians, makes not a single contribution to the cause of science, and its delegates are remarkable only for the looseness and incongruity of their ideas. There was a delicious little touch of irony which we fear was not appreciated by our New York *savants*, in Dr. Quackenbush's motion, "That Dr. Garrison, of New York, be requested to prepare a history of diphtheria, and present it at the next annual meeting of the Society." We regret that it was laid on the table. It might have evoked something worthy of the body so worthily represented by that gentleman. He would have had the geographical and chronological history of the disease ready made to his hand in the present number of the MONTHLY, and with a little imagination the rest might easily have been filled in. Dr. Swinburne's paper was certainly in every way far inferior to the lucid exposition of the same subject by Dr. Clarke, before the Academy of Medicine, which it undertook to controvert; but it will be spread far and wide, as the latter never can be, and will leave the impression on the minds of those who read it, without an opportunity to see the latter, that Prof. C. is an unscrupulous partisan rather than a calm investigator of scientific truths.

— OBITUARY—*Medical Cadet Delafield*.—We copy the following resolutions relative to the death of this talented and devoted young aspirant to medical honors in the service of his country, from the *American Medical Times*:

At a meeting of Medical Cadets, U. S. Army, held in Washington, D. C., Jan. 20th, W. D. Day, of the General Hospital, Alexandria, was elected Chairman, and H. A. Robbins, of the Circle Hospital, Washington, Secretary. Messrs. Paine, Davis, and Bodman, were appointed a committee to draft resolutions on the death of Medical Cadet DELAFIELD, and presented the following, which were unanimously adopted:

Whereas, It has pleased the Supreme Ruler of events to remove from our midst, by death, Medical Cadet RUFUS DELAFIELD, of New York City: therefore,

Resolved, That we bow in humble submission to this decree of an all-wise Providence, recognizing in the event the hand of "Him who doeth all things well."

Resolved, That in the death of Cadet DELAFIELD, the corps has lost an efficient and faithful member, the science of medicine an earnest and enthusiastic student, and the profession one of its most promising aspirants.

Resolved, That we will ever cherish the memory of the many virtues of the deceased, and imitate his patriotic devotion, his scientific zeal, and his uniformly kind and Christian deportment.

Resolved, That we extend to the bereaved relatives and friends of the deceased our sympathy and condolence in this dark hour of their trial, and commend to them the consolation that comes from a higher than human source.

Resolved, That we wear the usual badge of mourning for thirty days, and that a copy of these resolutions, signed by the Chairman and Secretary, be sent to the family of the deceased, and to the medical and other journals for publication.

— *Brigade Surgeon Luther V. Bell.*—At the same time with the early departure of this young man from the chosen scene of his labors, we are called upon to notice the decease of one ripe in years and experience, who hastened at his country's call to place all the treasures of his well-stored mind at her command, and, as it proved, to sacrifice them on her altar. The following resolutions were offered by Dr. Bowditch, at a special meeting of the Suffolk District Medical Society, on Friday, February 11th:

Resolved, That the Suffolk District Medical Society has learned with mingled emotions of the death of Dr. Luther V. Bell, recently President of the Massachusetts Medical Society.

Resolved, That while we feel sorrow at the great loss which the community and the profession have sustained in the death of so good and so wise a man, we experience a just pride in the fact that as one of our profession, having enlisted at the earliest moment of this sacred war, he died at his post of honor, thus crowning a life of almost unexampled professional success and reputation with the sweet fame that always clusters around the memory of the dying patriot.

Resolved, That we tender our most cordial sympathy to his now orphaned children; and in token thereof, it be voted that these resolutions, signed by the President and Secretary, be forwarded to them.

The following from Dr. Jackson's remarks on seconding the resolutions will give some idea of the varied attainments of this well-known physician:

Dr. Bell was an eminent man, not only as a physician, but also as a man of science. He was not only a good anatomist and a skillful surgeon, but was also a man of great inventive genius, especially in the mechanical arts. To him we owe the original invention of the atmospheric dispatch-bearer, or telegraph, an instrument patented by others, years after Dr. Bell had given it to the public, and which is now in extensive use in England, and especially in the city of London. He was the first who pointed out the method, since adopted, for spinning flax, an invention of great value, and now in extensive use throughout the world. He made many improvements in architecture, and in ventilation and warming of hospitals and public buildings, and not a few destined for surgical purposes.

He was a man of commanding genius, possessing a vast amount of knowledge of various arts, and yet, withal, so modest, as to throw forth his matured ideas as if they were mere suggestions for others to consider.

Dr. Bell's character, as a good and kind-hearted man, is too well known to the medical profession and the public in this vicinity to re-

quire any mention from me. His eminence as a physician for the insane need not be urged, for all here know it full well.

The Honorable Dr. Hitchcock, in the Executive Council, alluded with so much feeling and eloquence to his patriotic devotion and zeal, that we cannot forbear transcribing a portion of his tribute:

“In the departments of Hygiene and Sanitary science, his wisdom was acknowledged and his authority unquestioned. In the literature and jurisprudence of insanity he was without a rival; and his opinions on questions of lunacy were usually accepted as final by populace, juries, and judges. With the modesty and dignity characteristic of true greatness, he received the highest honors in the gift of his professional brethren. In the literary or social circle he was affluent, instructive, and charming; and yet he never failed to command respect and win affection. As a politician he was well versed in constitutional law; and as a partisan his candor and magnanimity were proverbial, and were usually confessed by his opponents. His reverence for law and love of country were radical and abiding principles in his nature. When the red hand of treason was raised against the Government, he forgot his long-continued physical infirmity, and girded on his armor and gave himself for its defence. In charge of the health of the 11th Regiment, Massachusetts Volunteers, he went forth from the State and enrolled himself for the war in the loyal army of the Republic. His ability and fidelity soon led to his promotion as Brigade Surgeon to General Hooker's division on the Lower Potomac.

“He fell honorably in the service of his country—not amid the shock of battle—but, as the Christian hero would wish to die, resting on his armor peacefully in his tent. The profession to which he belonged, the Commonwealth he represented, the national army he served, will deeply feel his loss. His name and character will be held in sweet and sacred remembrance. Though dead, his example and fidelity to duty, and loyalty to country, will long live as an incentive to survivors to higher and nobler purposes of life.”

Thus, side by side do the ornaments of our noble profession, the gray-haired veteran and the fervid youth, with one common impulse throw themselves into the gap of their country's need, and thus side by side do they go down to the chambers of death, martyrs in a holy cause. Who shall say that their memories shall not be as green and their names as cherished as those of the patriots whose breath goes out amid the clash of arms with the red sword clasped in their clenched hands?

— EXTREMES MEET in death as in life. Last month we noticed the decease of the inventor of the Stomach-Pump, and now, strangely enough, we have to record that of the inventor of the Rectal Tube. Dr. O'Beirne, so well known for his somewhat peculiar views on the

subject of defecation, died, as we learn from the *Dublin Medical Press*, on the 16th of January. At the time of his death he was much interested in getting out a work on tetanus, which was to be published by subscription. It is probably somewhat doubtful now whether it ever makes its appearance. The doctor was a graduate of Edinburgh, and bore the dignities of Surgeon Extraordinary to the Queen in Ireland, and the ex-Presidency of the Royal College of Surgeons of Ireland, besides being consulting physician to many hospitals. He was at the battle of Waterloo, and held a war medal with eight clasps.

— HONOR TO WHOM HONOR.—We very cheerfully give insertion to the following correction of an absurd and unpardonable blunder:

“In the last English edition of Samuel Cooper’s *Surgical Dictionary*, a singular error has been committed by Mr. Erichsen, the author of the article upon Ligature of the Internal Iliac Artery. It is stated that this artery was first tied, and that successfully, in 1828, in the United States, by “Mr. Hudson, of New York.” To be correct it should have read, by Dr. S. Pomroy White, M.D., of New York, formerly of Hudson, in the State of New York. “As Dr. White performed this operation at a distance from his residence, and attended the patient without receiving any pecuniary compensation, we think the credit of the operation should not be accorded to Mr. Hudson.” —(*Am. Med. Times.*)

This is, however, about as near the truth as our English relatives ever come in their statements of American affairs.

— THE SANITARY COMMISSION ON HAND.—We clip the following from the correspondence of a daily paper:

The Sanitary Commission of Washington, with their usual promptness, have sent forward a good supply of the most needful articles for the comfort and relief of the wounded at Roanoke Island. Dr. J. W. Page, Sanitary Inspector, is here, with some sixty odd cases of hospital stores, the contributions of the ladies of the country for these humane purposes. The list of these articles will be interesting. There are 600 shirts, 300 pairs linen drawers, 200 cotton flannel drawers, 1,000 sheets, 1,000 blankets, 370 pillows, 200 cushions, 1,300 pairs socks, 500 towels, 300 pillow-cases, 300 slippers, 108 packages farina, 2 barrels of roller bandages, 30 pounds of lint, 500 bed sacks, 8 kegs of sherry wine and liquors, and a case of drugs.

— The valuable Report on Pneumonia, a portion of which we reprint this month, is from the pen of Prof. Austin Flint, M.D., whose labors in the field of thoracic disease are so well known to all our readers.

THE AMERICAN MEDICAL MONTHLY.

APRIL, 1862.

LECTURES, MONOGRAPHS, AND CASES.

A Clinical Lecture upon some of the Diseases of the Spinal Cord.
Delivered in Bellevue Hospital. By T. GAILLARD THOMAS, M.D.

Active Congestion of the Spinal Cord, causing Paraplegia and Death.—The first case to which I shall call your attention this morning, gentlemen, is that of the young woman who now lies before you in a paraplegic condition. Her name is Agnes Kilvain; she is a native of Ireland, but has resided in this country for fourteen years; is married, but has had no children, and has been living in a tenement house in this city, performing the duties of housekeeping. Upon inquiry, we find that she has no well-marked hereditary predisposition, that her habits have been moderately intemperate, and that she has been, until the present attack of illness, a robust woman. She gives us the following history of her present illness: On the evening of Nov. 23d, 1861, which she says was very cold and inclement, she walked out after dark with very thin shoes and stockings, and got her feet wet, and body thoroughly chilled. She retired that night, feeling, however, about as well as usual. During the course of the night she awoke from a sound sleep, with a peculiar "heavy feeling in the feet;" and finding that she lifted them with difficulty, and that they seemed to be numb and "asleep," she roused her husband, who was by her side, and told him of it. He made light of the symptoms

which had "alarmed her," and she in a short time fell asleep again, and did not awake until morning; then she found the heavy feeling and inability to move the legs very marked, and getting out of bed with much effort, found that she was unable to stand; in fact, that she was entirely paralyzed in the lower extremities. This, I told you, took place on the night of the 23d of November; on the 6th of December she entered this institution, having been confined to bed, and been paralyzed during the intervening time.

We find her now in the following condition: She lies quietly upon her back, and does not appear to be suffering at all; her pulse is 120 to the minute, and in character nearly normal; her skin is warm and dry, but not of a feverish dryness or warmth; her tongue is covered slightly with a white fur. Over the sacrum, a slough of considerable size, about equal to that of the extended hand, has occurred. The paralysis of the legs is almost complete; the patient being able only to draw them up slowly, and with much effort, for six or eight inches, in bed. She is utterly unable to stand, and we may say that the paralysis of the inferior extremities is as complete as it well could be. She complains of nothing beside the loss of power, but has, during her illness, experienced pain in the back. Upon firm pressure, a little pain is found to exist over the second and third lumbar vertebræ. Her menstrual flow is irregular. She has occasionally had jerking of the legs, and formication appears to have existed, but not positively. At present, sensibility is much impaired in the paralyzed limbs.

Diagnosis.—The facts that this attack came on so suddenly, has become so complete, and has been accompanied by such evidences of profound nervous derangement in the paralyzed parts, lead me very positively to the conclusion that the spinal cord is seriously affected, and that its structure has become altered, probably, to an irreparable degree. The patient was, you observe, perfectly well on retiring to bed, in the morning rose completely paraplegic, and has continued so since. The affections of the cord, which might have resulted thus, are the following: active congestion, spinal apoplexy, and red softening; I know of none other which would have been likely to give us the train of symptoms which have been here presented to us. I do not believe that we have to deal with a case of simple congestion, because the attack was too complete and sudden for that; and if congestion did exist as the pathological state in the beginning, it must have been followed by softening for such grave results to have followed. Spinal apoplexy I would discard, because the attack was not sudden enough

for this, because it was accompanied by too little pain, and because that condition is at best a very rare affection.

I therefore venture upon the diagnosis of red softening, reminding you, however, of the great difficulty of determining positively concerning the lesions occurring to this delicate organ.

Prognosis.—The patient is so completely paralyzed, and has become so much weakened already, that no one experienced in such cases would hesitate about making a decided prognosis against her recovery, and I believe that in a very short time she will succumb.

Treatment.—Had I seen this patient in the beginning, I should probably have cupped or leached her freely over the painful spot on the spine, kept her perfectly quiet in bed, and after a cathartic, given ergot, belladonna, or iodide of potassium, as possessing (as proved by Brown-Séquard) the power of disgorging the vessels of the cord. Now, however, very little can be done. I shall order that her bowels be acted upon by a saline cathartic, and that two nitric acid issues should be placed on each side of the spine, opposite the painful part. The patient will be kept quiet, and will receive the best diet afforded by the institution.

Dec. 16th.—I have to report to you to-day the death of Agnes Kilvain. From the last date she went steadily down, growing weaker every day until to-day, when Dr. Frank Lyman, the House Physician, was suddenly called to her, and found her in a syncopic state, from which she could not be roused.

Post-Mortem Appearances.—Dec. 18th.—Since we last met, the body of Agnes has been examined. Nothing worthy of note was found in any organ except the cord. This was carefully removed by Dr. Lyman, and as nothing could be learned from an examination by the eye, I submitted it for microscopical examination to Drs. Metcalfe and Echeverria, who made concerning it virtually the same report. Dr. Echeverria was kind enough to give me a written report of his investigation, which I give you in his own words:

“The bodies of the four dorsal vertebræ were neither rough, nor changed in their structure; there was no thickening, and very little congestion, of the dura mater. The meninges, however, were much congested, but without any thickening or trace of exudation.

“The external appearance of the cord was natural, and it felt uniformly consistent. Being cut through the posterior median line, the gray matter appeared of normal consistency, and exhibited a light rose coloration, more marked in the lower part of the cord.

“In the cervical region (lower part) the gray matter presented

two small clots, certainly produced after tearing of the vessels during post-mortem examination, as there was no congestion around them, nor any of the characters of apoplectic clots.

"Examined under the microscope, the white matter was normal, with a congestive state of its capillaries.

"The gray matter exhibited in the lumbar region a more increased vascularity than in the others. It was also found more abundant with *myelitic* cells and nuclei, and with a more granular amorphous matter; but without corpuscles of exudation, nor any trace whatever of albuminous exudation—no abnormal existence of fatty cells and granulations. There were also some multipolar nervous cells.

"The ganglia in the lumbar region were abundant in fatty granulations, but normal as to the rest of their structure."

Remarks.—In this case, then, gentlemen, there was an error in diagnosis; that error arising from the fact of our undervaluing too much the results of simple congestion of the cord, or rather, from our venturing to exclude this pathological state, upon the ground of the extreme gravity of the symptoms. The bearing of the diagnosis upon treatment is too obvious to need mention, but even with the light given us by this case, I confess that in another of similar character, I know of no means by which a differentiation could be made. True, Brown-Séquard declares that in myelitis the urine is always alkaline, while in other states it is acid; but I know too little of this test to speak of its reliability.

Congestion of the Spinal Cord, and commencing Myelitis—producing Paraplegia, &c.

Jan. 8th.—The patient whom I now show you, gentlemen, entered the hospital on the day before yesterday. Her name is Sarah Murray; she is 23 years of age, a native of Rhode Island, and is married. Previous to the present illness, she had always been a robust and healthy woman. No tendency to hereditary disease is traceable in her family history. In answer to our questions, she gives us the following account of the attack of sickness which has brought her into our service: On the 19th of December last she went to bed feeling perfectly well, after having been at work all day. Some days before this she had been exposed to cold, but had felt no evil effects from it, and can trace no connection between it and what I am going to tell you occurred on the night of the 19th of December. On this night she woke up experiencing a pain and numbness in her legs, and to a certain extent in her arms. Her feet felt precisely as if frost-bitten, and

on attempting to move them, she found that their strength had become greatly impaired. The pain in the legs was so severe that she could not again get asleep, and upon rising in the morning and endeavoring to put on her shoes, she found that she "had no feeling in her feet." After this, the numbness and pain extended up the legs, till in two days both lower extremities, from the hips down, were affected to such an extent that she could not walk at all, and could stand only with assistance. The upper extremities were also affected, though in a much less degree.

There is now pain in the back, but before admission here it did not annoy her. This pain does not extend around the body. She is much troubled with jerking and twitching of the muscles of the legs, but has had no convulsive movements of them. She has been constipated; for four days on one occasion, and then procured a dejection only by medicine. Soon after her attack, (in fact, the very morning after it,) she noticed that her urine dribbled away from her, and that an attempt to urinate gave her pain.

When asked as to the sensations felt in the lower limbs, she says that she has the feeling of pins driven rapidly into the flesh.

The sensibility of the extremities is not impaired, and the feet are not inordinately cold. The paralysis seems to have been progressive, for she cannot now stand at all. Upon examining the painful spot on the spine, we find it tender upon pressure; and you observe that as I take this lump of ice in my fingers, and pass it slowly down the spinal column, the patient does not complain until we reach this spot, when she cries out that the cold is so very intense that she is unable to stand it. At the present time, I would remark, there is no incontinence of urine, and that that fluid is normal in amount, and of acid reaction.

This is the history of the case—let me now rapidly point out its leading and characteristic features. A perfectly healthy and robust woman retires to bed in her usual health, rises in the morning partially paraplegic, and in two days becomes almost completely so. Twenty days have passed since that time, and she is very much in the same state; has not improved, and yet has not grown materially worse. Now, what diagnosis would seem best to explain the series of symptoms which we have before us? Unquestionably, the spinal cord is the delinquent organ, for upon the lesion of no other could this grave departure from proper innervation depend. But what morbid state of this delicate structure probably exists? From the fact that the attack came on very suddenly, was accompanied by

disorder of the bladder, pain in the back, very violent pain in the legs, prickling, and jerking of the muscles, we have, I think, every reason to deduce the conclusion that some acute organic affection exists. From the circumstance that no symptoms of the disease existed previous to the night of the 19th, we are safe in concluding that the paraplegia then occurring did not depend upon pressure from any tumor within the spinal canal, from any disease of the vertebræ, or from any gradual and subtle alteration supervening upon depraved nutrition—all of which would have produced their results more gradually. There are but three acute affections of the cord which could have presented us with this suddenly occurring series. One of these is active congestion; another, inflammation of the spinal meninges; and the last, myelitis, or inflammation of the cord itself.

I do not believe that this woman has spinal meningitis: 1st, because she had for nineteen days no pain in the back, and no violent pain on moving the body forward, or moving the lower limbs upon the trunk; 2d, because she has had no spasm of the muscles of the back, which is almost constant in meningitis; and 3d, the mere fact that that disease, without cerebral meningitis, (of which this patient presents no symptom,) is of very rare occurrence. The diagnosis rests, then, between active congestion and local myelitis. Taught by the error committed in the case of Agnes Kilvain, let us give to the former of these due weight, and not discard it on account of the gravity of the symptoms presenting themselves.

I am inclined to hope and believe that in this case we have to deal with congestion of the cord, and not with inflammation of its structure, and these are the reasons which so incline me. It is a fact worthy of note, and which I have already mentioned, that in myelitis the urine almost always becomes alkaline. Now in this case it has been twice tested, and found acid. In myelitis a constricting band is commonly felt around the body. Here there is none. Were this myelitis, the paralysis would have increased very much within the three weeks which have intervened since the patient's seizure. We find that such is not the fact. But there is one circumstance which gives to the case the appearance of myelitis—namely, the occurrence of severe pain and sense of great coldness, as a lump of ice pressed down the spine reaches a certain spot, where likewise pain upon pressure, and pain even without pressure, exists. Recollect that the patient is distinct and positive in her assertion that this pain was absent before her entrance here, which was only two days ago, and you will agree with me, I think, in regarding this as the probable commencement of

myelitis, the result of a congestion which had existed for nearly three weeks. The diagnosis which I venture, then, for the reasons which I have given, to make in this case, is congestion of the spinal cord, perhaps with commencing myelitis.

With regard to the prognosis. If there is here only congestion, it is favorable; but if inflammatory softening of the cord has occurred, it is exceedingly grave. From the incompleteness of the paralysis, we hope that softening has not occurred, and hence the diagnosis is not hopeless. Fortunately, the treatment of the case would be the same for both the diseases, of which we suppose our patient to have one. The indication is clear, to diminish the circulation of blood in the congested or inflamed part. With this object in view, I shall order the application of 12 dry cups along the spine every day, and the unguentum belladonna to be rubbed vigorously over the same part night and morning. In addition to this, Dr. Fisher, the House-Physician, will see that her bowels are freely acted upon by the compound cathartic pill of the U. S. Dispensatory; and should the pain in the legs or back be at any time very violent, he will inject into the areolar tissue of the part 10 drops of Magendie's Solution of Morphia. Is there any medicine by which we may diminish the vascular supply to the cord? Thanks to the investigations of that great physiologist, Brown-Séquard, there are. He has proved, by direct experimentation, that belladonna, ergot, iodide of potassium, and mercury have this effect, while strychnine and sulphur increase it. This patient will be put, then, upon the use of powdered ergot, in 5-grain doses, thrice daily, belladonna being at the same time used externally. Dr. Fisher will see that every means is taken to prevent bed-sores or sloughs, which in these cases are common and serious, and nutritious, unstimulating food will be ordered.

Jan. 25th.—Seventeen days have now passed, gentlemen, since we investigated together the case of Sarah Murray, during which time you have seen her four or five times. Let me now report to you her progress, as noted by Dr. Martin, the Assistant House-Physician of the wards.

Jan. 10.—The treatment has been steadily pursued, but so far with no apparent benefit. The pains are very distressing, and the power of motion seems to be diminishing. Sensibility in the legs and arms does not seem to be greatly impaired. She has now no trouble in retaining or passing her urine.

Jan. 12th.—Although the woman gives no history of syphilis, still it was thought from the character of the pains, from some enlarge-

ment of the inguinal and post-cervical glands, and from some eruption of a scaly character on her legs, that there might be a specific element in the case; and she was ordered iodide of potassium in large doses. Other remedies continued.

Jan. 15th.—Patient says she is getting worse; the pains in the legs banish sleep. Ordered a pill of hyoscyamus at bedtime.

Jan. 20th.—Condition scarcely changed. Treatment has been the same. The repeated cupping and use of belladonna have relieved the pain in the back, but in the extremities the pain is as great as ever.

Jan. 24th.—Has been taking iod. potass. since last date; seems a little better; can stand alone, and even take a few steps. Pain not diminished.

Jan. 25th.—She was able to get out of bed and sit up nearly an hour to-day. Pains no better; ergot resumed.

You now have the progress of the case up to to-day. Helping the patient out of bed, and holding her to walk, you perceive that she is much better, although still very weak; the fact that she is now able to totter across the floor, whereas, upon admission, she could not even stand, is decidedly encouraging, and her improvement almost convinces us that myelitis, if present, was in its incipency, and had not progressed to softening.

It is possible, however, that this disease is even now slowly progressing, and that the improvement in the patient is due to our having overcome the congestion which existed before and with it. Time alone can settle this point; and as it passes I shall keep you informed of the progress of the case.

March 1st.—Sarah Murray has improved very steadily and rapidly; walks with comparative ease, and is evidently recovering from her paraplegia. Treatment continued.

Paralysis of Upper and Lower Extremities, due to a Tumor in the Spinal Canal.

The patient's name is John White; he is sixty-one years of age, a native of Ireland, and was admitted here on the 14th of December, suffering from an attack of asthma. The following is his previous history, as recorded by Dr. Lyman, the house-physician of the service: For two years past the patient has been subject to attacks of asthma, and on several occasions has had hæmoptysis. During the past winter he has had a cough, and has emaciated somewhat.

For the past year the right hand has been affected by paralysis agitans. On the 10th of January he began to complain of pain over the

spinal column, opposite the juncture of the cervical and dorsal vertebræ, which he described as being constant and severe. It extended down the muscles of both upper extremities, and between the scapulæ. At this time his pulse was 120 to the minute; tongue covered with a thick, white fur, and all the secretions and excretions markedly acid. The pain being regarded as rheumatic, he was put upon alkaline remedies, but did not improve; in fact, his condition remained the same until the 14th of January, when he complained of pain in the left arm, and lost power in that member. On the next day his left leg became paralyzed; on the next, his right leg, and soon after the right arm also.

This condition has continued until the present date, the 18th of January, 1862. I will now give you his present symptoms. He has, as you observe, lost almost entirely the voluntary control of his upper limbs, and entirely that of his lower. His pulse is about 140 to the minute, quick and weak; he respire laboriously, and with inspiration there is a loud laryngeal rattle, showing the accumulation of mucus in the larynx and larger bronchi. There is considerable pain in the back, opposite the upper dorsal vertebræ, increased by pressure. Paralysis of the bladder exists to such a degree that the urine has to be drawn off by the catheter.

He tells us that he has jerkings of the legs, due to irregular muscular movements, but no formication or prickings have been noticed. Reflex movements in the lower limbs are perfect, and loss of sensation is not entire.

Over the apices of both lungs dullness exists upon percussion, and a blowing sound is perceived upon auscultation over the right mammary region.

Diagnosis.—From the fact that the patient has had hæmoptysis, cough, emaciation, and that these rational signs are supported by the physical ones of dullness under the clavicles, I should conclude that a certain amount of tubercular deposit has taken place in the apices of his lungs, and it is highly probable that upon this depends the asthma of which he has complained during the last two years. The blowing sound heard with the heart's systole may depend upon aortic obstruction or roughness, or perhaps upon the extremely anæmic state of the patient, which I shall not stop to consider, for it in nowise concerns the main disease from which he labors, namely, paralysis of all his members. For the explanation of this, we must go to the spinal cord, and at a glance at the case, we are forced to conclude that some serious organic lesion can alone account for the grave state before us.

This may be, I think, any one of the following: Spinal apoplexy, a tumor pressing upon the cord, spinal meningitis, congestion, or red softening.

The first we may venture to exclude, by the mere fact that the paralysis began to show itself on the 14th, and was not complete until the 20th. Had it been due to rupture of a blood-vessel and sudden effusion of blood on the cord, the paralysis would have been immediate. The second is improbable, from the extreme rarity of the affection, and because the prominent symptoms showed themselves in such a short period of time. Had a tumor been the cause, I think that a much more gradual loss of power would have occurred.

None of the ordinary symptoms of meningitis are present, such as rigidity of the muscles of the back, intense pain on moving the trunk, &c., and thus we come down to congestion or softening as causes of the condition before us.

These are the chief differential signs between congestion and softening. In the first, patients are more paralyzed upon first rising from bed, than they are after moving around. There is a great amount of formication and numbness, (which are and have been absent here.) There is but little pain along the spine. The characteristics of the second are, alkalinity of urine, (absent here,) pain upon pressure over spine, and a band or constriction felt around the body. All the symptoms of neither of these states are present, but from the evidence before us, I strongly suspect that acute softening, commencing at the upper part of the cord and extending downward, is the moving cause of the trouble we behold.

Prognosis.—I need hardly tell you that our patient is in a most critical state; nothing can be done to cause his forces to rally, and we may safely predict that before 48 hours have passed the scene will close.

February 2nd.—White died on the night of February 1st; a post-mortem examination was made on the 2d, and I read you a *résumé* of a report of it by Dr. Lyman. Lungs adherent, congested, and tuberculous—the middle lobe of the right being almost solid with tubercle. There was roughness and insufficiency of the mitral valves.

The spinal column being carefully opened, a small tumor the size of a small hazel-nut popped out. This had been slightly adherent to the membranes. The brain was not examined.

Here, again, we were in error in supposing acute softening to exist. In spite of the absence of alkalinity of urine, the band around the body, persistent muscular spasm, &c., &c., we preferred to risk

this diagnosis rather than attribute the symptoms to so rare a pathological state as that which is now developed. But you perceive we were mistaken. I trust that this error may give us aid in ascertaining the truth in the next case of similar character which presents itself, though I confess that were exactly the counterpart of this to present itself, I should feel inclined to draw the same deduction from the symptoms presented. In other words, I do not know how a case of tumor developing paralysis so very rapidly (the patient being free from it before) could be differentiated from red softening.

Translations from the German. By C. A. HARTMANN, M.D., of Cleveland, Ohio.

IV. *Arthroxerosis and Hydrops of the Knee-Joint.* By Prof. FR. SCHUH.

Hydrops of the knee-joint, resulting from congestion or slight inflammation of the synovial membrane, is easily removed by quietude, cold applications, and resorbents, (muriate of ammonia in solution, mercurial and iodine ointment, gum-ammoniac boiled to a paste with vinegar of squills, or pressure by bandages;) in obstinate cases, by artificial suppuration. But the case is quite different when the synovial membrane has become thickened, and covered with vegetations of a cellular, cartilaginous, osseous, or mixed character. Although quite frequent, this form is not well known. It resists obstinately all the remedies enumerated.

Symptoms.—The exuberant appearance of areolar tissue in the joint is frequently preceded, for several weeks, by violent pains in the joint, or over the whole extremity. As long as the new formations are small, moderate movements of the joint are not prevented; there is only an increase in temperature and sensibility, when they are too long continued. Longer excrescences are apt to get between the articular surfaces, causing sudden pain, and suspending all motion, until they are released. Frequently such formations can be felt as movable, irregular strings by the sides of, or above the patella, even if there be considerable accumulation of fluids in the joint. Cartilaginous or osseous growths produce, during movements, a dry, rattling noise, occasionally with slight interrupted concussions. By-and-by the roughness of the bones becomes manifest to the examining finger. With the growth of the excrescences, the serviceableness of the joint is more and more impaired. Abnormal mobility in different direc-

tions, or false ankylosis, may follow. In either case there is limping, which increases when the extremity is shortened by resorption. Then the crucial ligaments and semilunar cartilages atrophy, the knee turns inward, or something like a subluxation happens.

The disease always runs on for several years. If the excrescences are soft, the joint may do for a moderate use, or even improve by resorption. Usually, however, repeated periods of irritation confine the patients to bed for a considerable time, and in one year the joint may be greatly malformed. Sclerosis once being completed, no further changes take place, except portions of an osseous excrescence be broken off and left free in the joint, or inflammation be induced by too great exertion of the suffering extremity.

The disease occurs in both sexes, but not previously to puberty. Aged patients are particularly apt to have hard excrescences. Causes: Everything resulting in a lasting congestion—injuries, for instance; but more frequently cold and rheumatism. A connection with gout is not probable.

Treatment.—As long as symptoms of congestion or inflammation are present, long-continued cold applications. Later, the resorbents already mentioned; or, where they prove useless, and considerable accumulation is present, puncture and injection of tincture of iodine, with from one to four parts of water and a little iodide of potassium. An elevated position and ice-applications afterwards.

Some enlargement of the knee always remains.—(*Zeitschr. Gesellschaft. d. Aerzte zu Wien.*)

V. *Studies on Twins.* By Prof. I. SPAETH, of Vienna.

Among 14,880 deliveries in the hospitals of Vienna, occurred 185 twin-births, or one in eight. In two cases two amnions presented themselves. Three times the after-birth of the first child came away before the other was born. Particular attention was paid to the following points:

1. *Condition of the After-Birth.*—One hundred and twenty-six cases examined. Two separate placentæ, two chorions, and two amnions, in 49; united placentæ, two chorions, two amnions, in 46; united placentæ, one chorion, two amnions, in 28; united placentæ, one chorion, and one amnion, in 2. United placentæ retained, very frequently, traces of a line of demarcation, with double as well as simple chorion. There was never any indication that a single chorion had been formed by the union of two. Where two chorions existed, the vessels of the two cords had no communication with each other;

in all cases with one amnion, and more than one-half of those with one chorion, these vessels formed superficial but well-marked anastomoses from one side to the other: either between the veins alone, or between the arteries also. In one case the artery of the one fœtus anastomosed with a vein of the other. In such cases the second child may bleed to death through the cord of the first-born, if that cord is not tied.

2. *Sexual Condition of the Children.*—In less than one-third of all cases the children were of different sexes. Twins with united placenta and united chorion are always of the same sex; under other conditions they may be so.

3. *Degree of Development in Twins born alive.*—In 108 of 176 cases premature delivery took place; in three, abortion about the sixth month; only 62 pairs reaching the full term. Usually, the children were found of unequal size. The first-born was the largest, 29 times in 62; 13 times in 28 mature, and 16 times in 34 premature twins.

The largest pair measured $13\frac{1}{2}$ and $13\frac{3}{4}$ inches around the head, 19 and $19\frac{1}{4}$ inches in length; the smallest mature pair, $11\frac{1}{4}$ and $12\frac{3}{4}$ inches around the head, $16\frac{1}{4}$ and 18 inches in length—proving that twins may reach the normal size of single children born at full term.

4. *Vital Relations of the Children.*—In 176 out of 185 cases, both children were born alive; in 8 cases, one was dead; in one instance, both. In 4 cases of the 8 with a dead child, no cause of death could be ascertained; in 3 of the remaining 4, the fœtus died from torsion of the cord, and one in consequence of fibrinous deposits in the placenta.

5. *Development of the Ovum.*—In a case with united placenta, but two chorions, the uterine surface of one placenta was covered with numerous calcareous concretions; the other, normal. Several other cases exhibited a similar condition in regard to fibrinous exudations. Of two embryos enveloped in one chorion, one perished about the fifth month, in consequence of induration of the placenta, while the other continued in its normal development. Such differences occur even where the two umbilical arteries communicate with each other. In one birth, the first-born child was well developed and living; the head of its mate had to be perforated, on account of hydrocephalus, and the body showed extensive malformation: double hare-lip, cleft palate, atrophied eyeballs, club-feet; one radius and thumb, as well as stomach, and spleen deficient, &c.; still these two children had a united placenta, a common chorion, and anastomosing umbilical veins. With numerous anastomoses and one chorion, one fœtus may perish

without impediment to the normal development of the other. Credé seems, therefore, to be correct in saying: "Each foetus has a separate existence, independent from that of its mate."

6. *Superfecundation and Superfatation*.—It is now pretty generally admitted that gestation with twins arises from the fecundation of either two ovules, (from one or two Graafian follicles, or may be even from the two ovaries,) or of one ovule with two germs. In the latter case only one chorion (though occasionally two amnions) will be formed, the placentæ unite, and the children are of the same sex. Impregnation of two ovules results in the formation of two sets of membranes; the placentæ uniting, if the ovules are located near to each other in the womb. In either case, one copulation may be sufficient. It must be admitted, however, that two ova, with separate chorions, may possibly have been fecundated at different times. There is no proof that this causes the differing size of twins, as those evidently developed from two germs in one ovule present in this regard as much difference as the others.—(*Zeitschr. d. Gesellsch. d. Aertze zu Wien.*)

VI. *Apparatus for Fractures of the Leg*. By Dr. F. W. LORINSER, of Vienna.

All the disadvantages usually met with in the treatment of these fractures may be avoided by the use of a suspension-board, arranged as follows: Two boards, placed over each other, are so connected by screws that the inclination of the upper one can be altered. A soft cushion, placed on the upper board, serves to support the leg, in case the same is not kept entirely suspended. Quadrangular holes surrounding this cushion receive six wooden pillars. The two lower ones, connected by a transverse bar, so as to furnish a support to the sole of the foot, have strong iron hooks on their tops, which hooks receive the ends of a lace-work bandage applied around the foot, thus keeping the heel suspended, and preventing decubitus. The other pillars support two iron hoops, which keep the extremity from contact with the bed-clothes. Laterally, strong iron bars are fastened, by means of screws, to all the pillars; to them bandages may be tied, either suspending the whole leg—which is so often desirable—or effecting lateral traction. The whole apparatus can be suspended by means of hooks attached to the four angles.—(*Wiener Medizinische Wochenschrift.*)

Transactions of the Medical Society of the County of Kings.

MAY, 1861.

Dr. BELL presented the following abstract of

A Case of Catalepsy.

E. W., aged 26; born in England; gas-fitter. Entered the Brooklyn City Hospital 8th March, 1860. For several years he had been very intemperate, but since a slight attack of delirium tremens three months before, liquor had been kept from him. During this interval, however, he had several times drank burning fluid; once a pint at a single draught. His brother stated that he was subject to convulsions several times a day, latterly, and, until since he ceased speaking, he complained of seeing frightful objects; he also complained of severe pain of the epigastrium. For the last three days he has wholly refused food and drink, for fear of being poisoned, and now appears to be completely insensible to all inquiries. Is either incapable of the effort, or obstinately refuses to speak. Light pressure over the solar plexus throws the whole muscular system into violent spasmodic action, simulating epileptic convulsions. Respiration easy; heart's action feeble, but regular; pulse 64. Temperature only a little below par.

On making the effort, found it impossible to make him swallow anything; therefore ordered eight ounces of beef-tea, with half an ounce of whiskey, to be injected into the rectum every two hours. He remained for the most part quiet, but seemed to sleep but little, consequently paregoric was substituted for the whiskey. The "convulsions" rarely occurred, unless he was touched—especially if touched suddenly; at such times there was a convulsive tremor of his whole system, but without distortion of his features. Yet he would allow himself to be placed on the easy-chair, have a dejection every day or two, and pass his urine without difficulty and without resistance. This state of things continued about two weeks; meanwhile he had several times seized the bowl of beef-tea or pitcher of water, and ravenously gulped down its contents; a quart at a time. Thus he continued without material variation for eighteen days, when all of a sudden he sprang up over the foot of his bed and made a dash at the window as if to escape. The nurse quickly arrested his movement, and had no difficulty in returning him to his bed. Six hours afterwards he was *rigid* from head to foot. His arm or leg, if raised, for which it required considerable force, remained as left; and he could be raised by his

head to a perpendicular without the action of any of his muscles. He was totally insensible to pain, and took no notice of anything. He thus continued three days; during which time the beef-tea injections returned in an apparently normal state; his urine dribbled from him in bed. He now became more and more relaxed; gradually sank, and died April 2d, seven days after complete catalepsy.

Autopsy, thirteen hours after death. Stomach contracted to one-fourth its natural size. Other viscera healthy. Brain unusually vascular; and on the sides of the fissure, between the two hemispheres, there were several clots of lymph, two or three lines in thickness. The arachnoid was, in several places, twice its normal thickness. Each lateral ventricle contained an ounce of fluid.

Dr. HALLETT reported a case of *spreading* carbuncle, in a lady about 35 years of age; the carbuncle being on the back of the neck, and gradually extending into the surrounding tissue, which is of a dark-red color; the marginal inflammation appearing to be more destructive in its tendency than is usual in this disease. The doctor also remarked, that he had noticed an unusual prevalence of carbuncle and boils, recently; and he had reason to think that other practitioners had observed the same.

In the treatment of the particular case referred to, deep and repeated scarifications had not been followed by their usual benefit. The disease is still extending, though it has been under treatment ten days, and the system of the patient is now much depressed.

Dr. ENOS stated, that lately he has been in the habit of relying more on the constitutional treatment and the application of poultice in carbuncle, than on scarification. He was first induced to a reliance on this course of management by a patient who was unfortunately afflicted with a succession of carbuncles, and who, on account of the excessive pain of scarification, finally refused to have it performed. Those which occurred subsequently, and which were treated without scarification, certainly did quite as well, if not better, than those which had been freely scarified.

Dr. BELL mentioned, in relation to this subject, that he had recently had (in March) a case of malignant pustule that resulted in death. It, with two other cases that had occurred in his practice, had served to call his earnest attention to this disease, and that he would, at a future time, offer a paper on the subject. On examination, thus far, he had been particularly struck with the circumstance that, although all the cases he had heard of in this country were evidently sporadic, that, nevertheless, they had all occurred since the prevalence of epi-

zootic diseases among our domestic animals. And there was good reason to think that malignant pustule in this country agreed with that described by French authors, and was always due to animal poison.

Dr. ENOS reported

A Case of Labor complicated with Diphtheria.

The patient had been affected with diphtheria about two weeks, and was convalescing, when, her full period of utero-gestation being complete, labor supervened, and terminated well. The patient had a good "getting-up," and that which he had feared would prove a formidable complication on account of its apparent analogy to scarlatina, proved to be of little consequence. Traceable to this case, however, he had noticed some evidence of the contagiousness of diphtheria; a child having visited the house, though not the room of the patient, was about one week afterwards taken with the disease. In the same family with the child there were seven other persons, and four of them had diphtheria. The first case in the family—the child, which seemed to have taken it from the lying-in woman—was somewhat remarkable. It continued fifteen days, and the membrane finally came off from the fauces circumferentially, leaving a healthy mucous membrane. From the nares the membrane was thrown off earlier, and in the usual manner, leaving a tender surface. The other four cases were mild, and presented nothing unusual.

It was the general experience of the members of the section present, that diphtheria continues to prevail, though perhaps less extensively, and certainly less fatally, than it did a few months ago.

Dr. HAWLEY continued the history of his

Case of Paralysis.

He said that the santanine which he was giving last month had seemed to produce no effect whatever, and that he had returned for a time to the strychnia and iron prescription; yet the peculiar attacks, as of paralysis, had continued at irregular intervals. So, also, the convulsive fits, and the chill-and-fever symptoms. The Dr. stated that he did not think the account given of his report at the last meeting conveyed a sufficiently forcible idea of the sudden and complete changes in the character of the symptoms, and the very peculiar manner in which the patient was handled. As, for instance, the patient would one day be very bad, completely prostrated and helpless, and another time would be at the door to let the doctor in; and again he would be playing in the streets with other children, and in a little

time more be found at home creeping upon the floor, almost entirely helpless. One night the father came for the doctor, stating that the boy was very bad—could not walk at all; and when he got home he found him carrying a baby of two years about the floor. Since last meeting the doctor had tried electricity, with the usual unsatisfactory result.

In answer to questions, Dr. H. said the patient had tenderness of the spine, but slight irritation with croton oil had seemed to remove it.

The Dr. also stated that the patient had had a return at one time of the symptoms which he had before supposed might have been the result of the arsenical solution. Dr. HAWLEY thinks at present the boy is somewhat improved, yet he has lost something of the brightness of his eye.

Always after these attacks, in whatever form, the patient calls for food, and eats voraciously.

Dr. HAWLEY also gave a brief account of an operation performed by him for *Imperforate Vagina*. The patient was a little girl, two years of age. The membrane extended entirely from labia to labia, wholly closing the vagina, and was about a quarter of an inch in thickness. He divided it with the scalpel, and kept the parts separate by the daily introduction of lint. The parts healed kindly in a few days.

Dr. O. H. SMITH gave an account of three cases of serous effusion into the pleura and pericardii, all following closely upon each other, and all rapidly and singularly fatal.

The first was that of a young girl, 15 years of age. The doctor, on first visiting the patient, found that she had been prescribed for by another physician. She complained of some pain in the chest, and other symptoms, as of a slight cold. He gave very little medicine. The next night was sent for in haste; the girl had been taken suddenly with severe oppression about the chest, great difficulty of breathing, and other evident symptoms of pleuritic effusion. Patient grew rapidly worse, and died that night. Made a post-mortem examination, and found at least a quart of fluid in the left pleural cavity, and a considerable amount in the pericardium. No apparent inflammation.

The second patient was a young married man. Dr. SMITH said: About three weeks ago he called to see me, complaining of a slight cough and some little bronchial difficulty. Gave a cathartic, with small doses of tartrate of antimony, and in a few days he called again, when I found some dullness in right chest, lower part; prescribed

another cathartic and a stimulating diuretic. After a few days he came again, when I found that he had effusion into both chests; I gave a large calomel purge. Two days from this I was sent for, and found the patient greatly distressed; the dyspnœa very great in any position, and wholly impossible for the patient to lie down. Gave iodide of potassium and colchicum; next day found the patient still worse; greater dyspnœa, and pain in the region of the heart; prescribed as before, together with calomel, jalap, squills, &c., and applied a blister. In two days the patient died.

The autopsy revealed large effusions, three to four quarts, in the pleural cavities, and from six to eight ounces in the pericardium, together with some *recent* pneumonia, but no redness, false membrane, adhesions, or other symptoms of inflammation in the pleura or pericardium, with the exception of the serous effusions. The right ventricle contained a large clot, partially organized; a portion of the clot was white, firm, and elastic; a less firm and a darker portion was found extending through the semilunar valves to the artery.

The third patient of the kind, a Mr. C., was a man of middle age; has heretofore been pretty healthy, with the exception of some rheumatic gout. Was called, and found him in this not unusual condition, but in a little time he began to have a cough, though not severe, and he seemed to have no cardiac or other alarming difficulty; for some days complained of shortness of breath when he attempted to lie down. Yesterday found him pretty comfortable, but not so well as I expected; at 10 o'clock he went to bed, and soon had an attack of dyspnœa and suffocation, and *died* in a few minutes.

Case reported by Dr. J. C. JOHNSON.

An interesting Case of Death from Interruption of the Functions of the Nerves of Respiration came under my observation in a patient of Dr. Marvin. Mr. S., a strong, vigorous American, 38 years of age, of short neck and full habit, was taken to a station-house in New York about six o'clock, P. M., on Saturday, October 14th, upon the supposition that he was intoxicated, he having fallen on Broadway while walking. Prior to the panic of 1857 he had been a strictly temperate man, a partner in an extensive tailoring establishment. In that year the firm failed, and Mr. S. seemed to lose all ambition, and instead of attempting to better his fortunes, commenced drinking, and became exceedingly intemperate. It is not, therefore, improbable that he was under the influence of liquor when taken to the station-house. He remained locked up the whole of that night and the fore-

noon of the next day. Dr. Marvin saw him at his house about two o'clock, P. M. At that time he was fully conscious; complained of a little fullness in his head. The lower extremities were completely paralyzed, both in sensation and motion. There was partial paralysis of sensation and motion in the arms. The flexors had, however, more power than the extensors of the forearm. If his arms were laid beside him, as he lay on his back, he could with considerable difficulty raise them upon his breast, but could not again extend them so as to place them by his side. About seven o'clock that evening I saw him. At that time he was perfectly conscious, and inclined to be witty as a catheter was introduced. His pulse was 68, and rather full. He was complaining of great pain between his shoulders, and wished the pillows arranged so that he could rest more easily. I raised him in bed, when the pain was so much increased that it was necessary to return him immediately to his former position. His respiration was also increased by the movement—before it had been 16 per minute. There was no ecchymosis, and no indication of any violence to the neck, and nothing to attract attention to any particular point, except the intense pain in the upper dorsal vertebra, which he had desired to have alleviated by the change of position.

Attempts were made, by tickling the soles of the feet, by forcibly bending the great-toe, and by pricking the limbs, to excite reflex action, but they were unsuccessful. He complained of partial numbness, and a pricking sensation in his arms and hands. There was no paralysis of the tongue; he could at will protrude it in any direction—either to the right or left, or directly outward. The pupil was natural.

The treatment, as directed by Dr. Marvin, was: Warmth to the extremities; a turpentine enema; active cathartic, and a blister, six inches in length by two inches, over the spine, at the point of pain.

The next day he remained in about the same condition as before. Had not slept at all during the night. The turpentine enema was repeated. There had been an unusual secretion of urine from seven P. M. to nine A. M.—over three pints—and about the same amount by 8 P. M.

Tuesday morning, he had lost entirely the power of his hands. He did not complain of any numbness in his arms, and, with the exception of being able to shrug his shoulders slightly, there was neither sensation nor motion of any portion of his upper extremities. There was some little difficulty in the use of his lips; in attempting to

drink, his lips could not grasp the tumbler, and the water would run down his neck. The bowels were enormously distended with flatus. This had been heretofore relieved by the turpentine enema, but now it was so extensive that a rectum-tube was introduced, and by pressure on the abdomen, quite a large amount of wind passed. The quantity of urine drawn off during the twenty-four hours, as nearly as could be estimated, was three quarts. In the evening, as the catheter was about being introduced, I was informed that it was not necessary, as, since the introduction in the morning, he had made water freely. The catheter was, however, introduced, and the bladder was found distended. There had been a dribbling from an over-distended bladder during the latter part of the day, notwithstanding the bladder had been emptied in the morning. The urine had an ammoniacal smell, and the last that passed was thick, and of a dark-brown color.

The patient remained in much the same condition till Friday night. The quantity of urine was above the normal amount, and the enormous distention of the abdomen continued. About eight o'clock Friday evening, when I saw him, his mind was perfectly clear, and he spoke quite wittily. His respiration was considerably increased, and he desired fresh air. During the night his respiration continued to quicken, and he experienced considerable distress. In the morning the difficulty of respiration had increased so much as to alarm the friends. The patient commenced calling for the doctor, but before we arrived he had expired, asphyxiated. There was not the slightest unconsciousness from the time the patient came under professional observation till the time of his decease. There was no priapism after he was brought to the house; whether anything of the kind occurred at the station-house, could not be ascertained.

Earnest endeavors to have an autopsy were made, but the friends would not allow it. This was much to be regretted, as the case was probably one of those rare cases of spinal apoplexy similar to that detailed by Abercrombie and Curling. I do not think the case could have been a fracture of the spinous processes of the vertebra, as there was no ecchymosis at any time perceptible. There was no swelling of the neck, no departure from the natural outline of the neck; nor was any crepitus observed. Had there been either of these present, they could hardly have escaped observation during a week's attendance on the case, and the daily observation of the blister on that portion of the neck. There could have been no lesion of the brain, as there was no unconsciousness during the progress of the

case. The paralysis was equal on both sides, and commenced in the lower extremities, gradually extending up the body, till death was caused from asphyxia, from pressure on the phrenic nerve.

The most probable pathology of the case is, that there was an extravasation of blood about the junction of the cervical and dorsal vertebræ, as shown by the entire paralysis of the lower extremities, bladder, and bowels, and the slight paralysis of arms. As the extravasation continued, the portion of the cord from which the brachial nerves originate was compressed, as shown by the supervening complete paralysis of the arms, and the death of the patient by asphyxia, from the extravasation extending up the cord till the phrenic nerve was compressed.

Our standard authorities have very little to say upon these cases. Watson says: "Spinal hæmorrhage, it is well known, does occasionally occur, but the symptoms to which it gives rise are by no means peculiar or distinctive. They consist of *pain* in some part of the spine, paralysis, convulsions."

Wood details symptoms similar to these under the head of spinal meningitis, and gives the lesions resulting from inflammation of the meninges as the results of post-mortem investigations.

The most complete description that I have been able to find of this disease is in Copland's Medical Dictionary.

He gives the following lesions: Hæmorrhage may take place into the external sac of the arachnoid, between the dura mater and arachnoid; or into the internal sac of the arachnoid; or between the pia mater and the arachnoid. When thus seated, the hæmorrhagic effusion has been called hæmatorrhæcis by Ollivier. When hæmorrhage occurs in the structure of the cord, it has been termed *hæmatomy-élie* by this writer. The causes of spinal apoplexy are chiefly injuries sustained on the spine, especially blows, falls, fractures, concussions. Spontaneous hæmorrhage in either of the situations just specified, or between the dura mater and the walls of the vertebral canal, is rarely met with, and, when observed, is to be attributed chiefly to pre-existing disease of the vessels; extreme exertion or efforts of any kind, or unusual demands made upon the circulation of the cord, or whatever interrupts the return of blood from or through the vertebral sinuses, being the more immediate exciting causes.

The symptoms of spinal apoplexy have been imperfectly observed, owing to the rarity of the disease, and to the early progress of it having passed unobserved by competent persons. The most frequent phenomena characterizing the attack are pain, sudden and acute, in the

region of the spine, corresponding with the seat of extravasation, convulsion, and paralysis.

The following case, reported by Mr. Curling in the third report of the Proceedings of the Pathological Society of London, is related by Dr. Copland:

A gentleman, aged 44, a stout man, of active habits, but a free liver, and subject to the gout, had just got into bed about 11 p. m., when he was suddenly seized with spasm in the stomach, and found that he had lost all sensation and power of motion in the lower half of his body. An hour after this seizure, the patient was found shivering in bed by Mr. Curling, with complete paraplegia of the whole of the body below the third ribs, and strong priapism. He had perfect use of the arms, but complained of pain about the wrists. No excito-motory actions were producible. His mind was quite clear. After the circulation was restored, the treatment consisted chiefly of cupping between the shoulders; a blister to the nape of the neck; purgatives to unload the bowels, frequent doses of calomel, and regular relief of the bladder. The priapism subsided in about twenty-four hours. There was no extension of the paralysis except numbness of the hands, and at last, imperfect power of using them.

During the first eighteen hours after the attack scarcely any urine was secreted, and it subsequently continued scanty in amount. The breathing gradually became embarrassed and difficult, and the patient died the fourth day after the seizure, his intellect being unaffected until within a few hours of his death.

On examination, the muscles of the back were much loaded with blood. No fluid escaped on opening the theca vertebralis, the head being in a depending position. The vessels on the surface of the cord were very congested. An incision was made along the front of the medulla, commencing at a part corresponding with the third cervical vertebra, and terminating at the last dorsal. There were two small clots of blood, amounting together to about a drachm, in the interior of the medulla, occupying about an inch and a half in extent, and situated between the origin of the second and third pair of dorsal nerves. The substance of the cord around the clots was somewhat soft. The medulla was more or less infiltrated, and stained with blood from the site of the clots, as high as the third cervical vertebra, and downward as low as the last dorsal.

The indications of treatment, as mentioned by Dr. Copland, are:

1st. To arrest and prevent the recurrence of the effusion.

2d. To favor the absorption of the effused blood.

3d. To keep within due bounds the vascular reaction or irritation accompanying or following upon the process of reparation in the seat of injury. For these purposes, he recommends blood-letting, chiefly by cupping-glasses along the spine, according to the pulse and habit of body of the patient; terebinthinate epithems or embrocations along the spine; the facial or lateral recumbent posture; perfect rest, attention to the secretions and excretions, frequent recourse to the catheter if it should be at all required, and the earliest and utmost endeavors to prevent bed-sores, by recourse to air-pillows, the hydrostatic bed, &c.

Dr. HALLETT reported the following case of

Inguinal Hernia.

M. McCarty, æt. 22, has been the subject of inguinal hernia of the left side for several years, but did not consider it of sufficient importance to take the precaution of wearing a truss. Occasionally it would come down slightly, but was always easily reduced, without assistance.

On the night of the 10th of April I was summoned to attend him in haste. I found him suffering great agony from the hernia, which had become strangulated. The tumor was extremely tense, and extended into the scrotum. It had been in this position for about eighteen hours, during most of which time the patient pursued his usual occupation of grocer's clerk. After making a few slight attempts at reduction with the taxis, which proved unsuccessful, I requested that Dr. William Gilfillan be called in to assist me. Upon his arrival we immediately put the patient under the influence of chloroform. And being now placed in the usual position, with the knees bent, we again attempted its reduction. But the stricture being very rigid, and the gut filled with fæculent matter, we were unable to return it, after the most patient and persevering effort. Considering that any further manipulation of the tumor might endanger the patient's life, we began to feel that an operation would be the only means of affording him relief; when calling to mind Dr. Jessop's case, reported in the January number of the *Lancet*, in which he succeeded in reducing a strangulated hernia after all the usual means had failed to accomplish it, by a method first suggested by Hesselbach, but then claimed to be a new method—that is, by the means of an assistant raising the patient by the knees from the bed, at an angle of about forty-five degrees—thus taking off the downward pressure of the viscera, and making their

weight to fall in the opposite direction; by this means causing a dragging upon the strictured intestine from within, in the direction upward and backward. We now resorted to this method by the means of two assistants, who held the patient in the position indicated, we all the while gently manipulating the tumor, and making attempts at its reduction, occasionally making upward pressure upon the abdomen.

After a time we had the gratification of feeling that the tension was becoming gradually less, indicating that the semi-fluid contents of the sac were gravitating into the abdominal cavity. By persevering a little longer, we had the gratification of returning the intestine to its natural position. It is the opinion of Dr. Gilfillan, as well as myself, that it would have been utterly impossible to have reduced this hernia by the ordinary methods employed, as the strictured gut contained fecal matter, and scarcely any gas, was very firm and unyielding, and the stricture at the neck very small and rigid.

Dr. HALLETT's paper on Strangulated Hernia being under discussion, Dr. WILLIAM GILFILLAN stated that the hernia described by Dr. HALLETT was as large as a closed fist. In this case a considerable amount of force was applied, in opposition to the usual surgical rule, which was, if the strangulation was recent, more force might be applied than if it was old. The reason of this was, that the bowel becomes softened, and more easily gives way. Dr. GILFILLAN had seen, when a student, a case which impressed on him the importance of this rule. It was a strangulated hernia, which was reduced after some time, and yet the patient died. The autopsy revealed the fact that the intestine, softened with a tendency to gangrene, had been perforated in three places, corresponding to the fingers of the surgeon who had reduced it. Dr. Jessop claims this method as his own. Dr. Gilfillan had seen Dr. Joseph M. Dowell, of St. Louis, reduce a strangulated scrotal hernia in a negro, by raising the negro by his heels, and pouring cold water upon his scrotum. This hernia was reduced by emptying the tumor of its fluid contents. There was no gas, and no gurgling sound.

Dr. HART said that some time ago he had a patient with a scrotal hernia, strangulated for ten hours. Dr. H. expected an operation would be inevitable. The pain was intense, and he gave him 2 grs. of opium an hour; when the man had taken 6 grs. the hernia returned of its own accord. Dr. Chapman, many years ago, published a paper on the use of opium in large quantities in strangulated hernia,

and the ease with which they could be reduced when the pain was relieved. Dr. Hart advised the treatment should be tried.

Dr. Enos exhibited a cyst in the cerebellum, removed from a man 45 years of age. Five years ago the man consulted the doctor. At that time he complained of difficulty in writing. There was no paralysis; there was no loss of sensation, or any of the precursors of paralysis; his mental faculties had been good; finally he became deaf, so that he had to give up his situation. Then there came a weakness in his right limb, so that he had to walk with his limbs straddled wide apart. A few months afterwards he complained of pain in the back of the ear so severe that blisters were applied. Then followed difficulty in reading; he had to read large print. After two years, Dr. Enos lost sight of him. He could give no very definite history of him for the last three years; he understood that he improved so as to walk out. A few nights ago Dr. Enos was called to see him, but when he arrived the man was dead.

Post-mortem.—The whole body was swollen and waxy, presenting somewhat the appearance it has in renal disease. Almost the whole of the right cerebellum was occupied by a cyst. Near the crus cerebelli was a hard portion, probably cancerous; more probably cancerous than tubercular. The cyst pressed upon the tubercula quadrigemina, the seat of vision, according to Mons. Flourens. The uncertain motion of the patient was readily explained, as the cerebellum is the seat of motion.

QUARTERLY REPORTS ON MEDICAL PROGRESS.

REPORT ON MATERIA MEDICA AND THERAPEUTICS.

By DR. L. ELSBERG.

11. *Eupatorium Cannabinum against Asiatic Cholera.* By Dr. VAN DROMME. (Presse Méd.; Schmidt's Jahrbücher, No. 2, 1862.)
12. *Root of Sarracenia Purpurea a Remedy for Small-Pox.* By Surgeon HERBERT CHALMERS MILES. (London Epidemiological Society; Med. Times and Gazette; Lancet, [Am. Ed., Feb., 1862,] etc.)
13. *Bark of Pomegranate-Root as a Remedy in Tania Solium.* By HENRY R. TILTON, M.D., U. S. A. (Medical and Surgical Reporter, February 15, 22, 1862.)
14. *On Pinguoleum Æsculi Hippocastani.* By M. STILESEN. (Forhandl. ved. de Scandinav. Naturforskeres 8 Möde i Kjöbenhavn, p. 354.)
15. *On the Medical Employment of Croton Oil.* By M. JORET. (Bull. de Thérap.; Gazette Hebdomadaire de Médecine et de Chirurgie, Jan. 24, 1862.)

16. *Employment of Magnesia to insure the Assimilation of Cod-Liver Oil.* By M. DANNECY. (Bulletin Général de Thérapeutique Médicale et Chirurgicale, Vol. 61, p. 545; L'Union Médicale, Dec. 24, 1861; etc.)
17. *Wine in Large Doses a Remedy for Hæmorrhages.* By Dr. FAURE. (Gazette des Hôpitaux, No. 120, September, 1861.)
18. *Chloracetization: a New Means of Producing Local Anæsthesia.* By M. FOURNIE. (Gazette Médicale de Paris, No. 51, Dec. 21, 1861.)
19. *On Doses of Opium in Delirium Tremens.* By Prof. Dr. WM. ROSER. (Archiv. der Heilkunde, 1861, p. 191.)
20. *On Solidified Creosote.* By M. STANISLAS MARTIN. (Bulletin Gén. de Thérapeutique Médicale et Chirurgicale, Dec. 15, 1861.)
21. *The External Use of Glycerine as a Sudorific.* By JAMES JONES, M.D. (London Lancet, [Am. Edition,] February, 1862.)
22. *The Iced Bath in Delirium Tremens.* By LEWIS A. SAYRE, M.D. (American Medical Times, March 8, 1862.)
23. *The Pulverization of Mineral Waters, by M. Sales-Girons.* By M. POGGIALE. (Gazette Médicale de Paris, No. 2, 1862.)
24. *Sulphuric Acid in Diarrhæa.* By WILLIAM GRIFFITH. (London Medical Times and Gazette, Jan. 18, 1862.)
25. *On Mercury and Mercurialism.* By Dr. ROBERT OVERBECK. (Mercur und Syphilis. Physiologisch-Chemische and Pathologische Untersuchungen über das Quecksilber und über die Quecksilberkrankheiten. 8vo, pp. 349. Berlin: August Hirschwald, 1861; Review thereof, London Medical Times and Gazette, January 18, 1862.)
26. *On the Citro-Ammoniacal Pyrophosphate of Iron.* By E. N. CHAPMAN, A.M., M.D. (Boston Medical and Surgical Journal, February 6, 1862.)
27. *The Medicinal Properties of the Alkaline Hypophosphites.* By JOHN TAYLOR, M.R.C.S. (London Lancet, Dec. 4, 1861; Am. Edition, February, 1862.)
28. *On the Iodide and the Oxido-Iodide of Antimony.* By Dr. VAN DEN CORPUT. (Bulletin Gén. de Thérap., January 30, 1862.)
29. *Arseniate of Cafèine and Tanno-Arsenious Acid, two new Arsenical Preparations recommended as Anti-Periodics.* By Prof. Dr. GASTINEL, of Cairo. (Report of Dr. Schnepf to the Institute of Egypt; Gazette des Hôpitaux, No. 8, Jan. 21, 1862.)
30. *A Substitute for Sutures.* By H. TALBOT HIGGINSON, Esq. (Dublin Medical Press, January 29, 1862.)

11. Julius Clarus, whom we esteem as the best reporter on *Materia Medica* that we know of, informs us that Dr. Van Dromme claims to have obtained favorable results with *Eupatorium cannabinum* in the cholera epidemic of Belgium in 1859. An ounce—what part of the plant is not stated—was boiled with $1\frac{1}{2}$ litre [about 3 pints] of vinegar down to 1 litre; one-fifth as much Syrupus Belladonnæ was added to the decoction; and of this mixture, one to two table-spoonfuls an hour, the patient received after every attack of vomiting. The doses were given less often as soon as the cyanosis subsided, and entirely suspended as soon as bilious stools appeared. Besides, warm or cold water

(either acidulated or not) internally, washing with vinegar and water, cloths wet with vinegar and water to the abdomen, good ventilation, and not too warm covering of the patient, were employed. In consequence of this treatment, after two or three hours the cyanosis is said to gradually yield, and the warmth of body and pulse slowly to return, while vomiting and rice-water discharges may continue (without further injury, as soon as the functions of the heart and respiration are carried on properly,) for some days longer. Of 32 patients so treated, 26 recovered.

12. At a recent meeting of the London Epidemiological Society, a communication on an "Indian Remedy of Small-Pox" was received and discussed. It was from the pen of Herbert Chalmers Miles, Surgeon Royal Artillery, Halifax, Nova Scotia; and we extract the following as his conclusions from the information which he seems to have been at some pains to gather from the Indians. The Society desired to have the anti-varioid powers of the remedy tested in England.

(1.) In the case of an individual suspected to be under the influence of small-pox, but with no distinct eruption upon him, a large wine-glassful of an infusion of the root of the plant "*Sarracenia purpurea*," or pitcher-plant, (several specimens of which, including the root, were exhibited on the table,) is to be taken. The effect of this dose is to bring out the eruption. After a second and third dose, given at intervals of from four to six hours, the pustules subside, apparently losing their vitality. The patient feels better at the end of each dose, and, in the graphic expression of the *Micmac*, "knows there is great change within him at once." (2.) In a subject already covered with the eruption of small-pox in the early stage, a dose or two will dissipate the pustules and subdue the febrile symptoms; the urine, from being scanty and high-colored, becomes pale and abundant; whilst from the first dose the feelings of the patient assure him that "the medicine is killing the disease." Under the influence of the remedy, in three or four days the prominent features of the constitutional disturbance subside, although, as a precautionary measure, the sick person is kept in camp until the ninth day. No marks of the eruption (as regards pitting, &c.,) have been left in cases examined that were treated by the remedy. (3.) With regard to the medicine acting (as is believed by the Indians) in the way of a preventive in those exposed to the infection, it is curious to note that in the camps where the remedy has been used the people keep a

weak infusion of the plant constantly prepared, and take a dose occasionally during the day, so as to "keep the antidote in the blood."

13. A fluid extract of the bark of pomegranate-root is prepared as follows: "Let ʒij. stand in Oj. of very strong alcohol for 14 days; filter; evaporate the alcohol, leaving the water of the alcohol combined with the active principles of the bark. This watery extract measures from f.ʒiv. to f.ʒvj., the quantity being governed by the strength of the alcohol." The treatment against tape-worm occupies less than twenty-four hours. "The patient takes a purge in the afternoon—either castor oil, salts, or any cathartic which the physician may select; he abstains from supper and breakfast, and then begins with the fluid extract, taking one-third of the whole quantity at a dose, which is to be repeated every hour and a half or two hours. This generally acts upon the bowels within a short time after the third dose is taken, bringing away the entire worm; if it should not act before twelve o'clock, a second purge is to be given." The latter seems seldom necessary. "Sometimes there is slight nausea, either from the medicine or the movements of the worm; this is promptly relieved by a tea-spoonful of vinegar, administered in cold water." Several cases of tape-worm successfully treated with pomegranate-root have recently been reported to the new *Dispensary Medical Society of New York*.

14. The oil of wild horse-chestnuts has several times, within the last few years, been brought forward as a very valuable remedy in rheumatic affections. We do not think it entitled to anything like the high encomiums that have been bestowed upon it, (especially in the advertisements of some London manufacturing house, which conceal the details of its preparation,) but yet worthy of a trial. Dr. Stilesen tells us he prepared it by having the chestnuts cut and dried, coarsely powdered, and digested with ether for about eight days. The whole mass was then pressed and filtered. The ether was then distilled, and about half the original quantity reobtained. The last traces of ether were evaporated with great difficulty, and the oil retained the odor of ether. On account of the large quantity of the ether required, the oil is pretty expensive. It is used by moistening a piece of flannel with it, and rubbing or applying morning and evening to parts affected. The skin becomes red, and a burning and tingling remains for some hours. The oil is probably identical in composition with croton oil, Stilesen thinks.

15. Dr. Joret regards the fears of physicians in the use of croton oil utterly unfounded. In his hands it has always been a remedy

without the slightest danger of unpleasant consequences, when prudently employed. He mixes it with oil of sweet almonds, to allow of smaller dosing, and administers it in small capsules in doses of a drop, half a drop, and quarter. As to its therapeutic applications, he offers nothing but what we think is well known, but calls on the profession to use it more frequently.

16. Many persons are unable to keep down cod-liver oil, returning it several hours after taking it, even when they have taken it at the beginning of a meal, and strange enough, only vomiting it after the digestion of the aliments has terminated. M. Dannecy having been consulted by many inconvenienced in this manner, and who yet swallowed the oil without any repugnance, recommended them to take after each dose from eight to ten grains of calcined magnesia, suspended in a small quantity of water. The success of the plan was most complete.

17. A previously healthy woman had suffered for fourteen days with extremely profuse bleeding from the oral cavity, together with asthma, constipation, and purpura hæmorrhagica. All available means having been tried without success, and death being imminent, alcoholic intoxication was induced and kept up, by giving every fifteen minutes a glass of old Bordeaux wine. On the next morning the bleeding had ceased, and other symptoms were also ameliorated. A chronic scorbutic condition of the gums continued for some time longer.

18. Dr. Fournié has submitted to the *Académie des Sciences* of Paris a new way of producing local anæsthesia, called by him chloroacetization; and MM. Bernard, Velpeau, and Jobert were appointed a Committee to report on its value. If, says Fournié, in a room with a temperature above 17° Cent., [63° F.,] the orifice of a thin glass retort or flask containing equal parts of pure crystallizable acetic acid and chloroform, the mixture to about half fill the flask, be accurately applied to a healthy and clean skin, not deprived of epidermis, the flask constantly maintained at the temperature of the hand, a complete insensibility of the part to which it is applied and of some of the deeper parts will be obtained in five minutes, and after only a very slight sensation of pain.

The vapors of acetic acid and chloroform applied in the manner mentioned, adjoining parts which it is not intended to render insensible being protected by diachylon plaster, may be employed as anæsthetics in all the operations of minor surgery which principally concern the skin, in many of major surgery, and in general in all cases

where general anæsthesia is contra-indicated, or when the patient, fearful of the dangers of inhalation, declines to avail himself of its benefits; and this method of chloracetization Fournié submits as the most certain, easiest, most simple and economic, and best local anæsthetic.

19. Prof. Roser, of Marburg, is of opinion that patients with delirium tremens sometimes die on account of the timidity of physicians in prescribing opium in large doses, from fear of poisoning. The patient may have taken 3, 4, or 6 grains, and is still getting worse and worse. The vital indication is to quiet the delirium; and this is to be done by energetic doses only. He advises at once 2 grains of morphia, and one grain more, hourly, until the pupils are strongly contracted, and the respirations descend to ten, eight, or even six in a minute. The appearance of a patient so treated, he admits, is alarming, but in such deep narcotizing lies his safety. He obtains a deep sleep, and awakes conscious; and if there is a relapse, this is easily vanquished. [Apropos to delirium tremens, we desire to add here, that since the issue of the MONTHLY, in which Dr. Smith's experience with tincture of ergot in this condition was reported, we have used experimentally the fluid extract of ergot in a very grave case of *mania-à-potu*, with surprising success. We do not, of course, attach undue weight to any *one* case, but were really struck with the apparent effects of the ergot. Trials with it should certainly be encouraged and reported. See, also, the cases successfully treated by the ice-bath, below.]

20. With the special view of the employment of creosote in caries of the teeth, a solidified preparation has been contrived by mixing 15 parts by weight of creosote with 10 of collodion. The mixture is of the consistence of jelly, and is used just as if the collodion had not been added. It will be found useful, we think, in many cases besides those for which it was made by M. Martin.

21. The following extract fully expresses the opinion of Dr. Jones, of the London Metropolitan Free Hospital, regarding glycerine as a sudorific, inducing "free and gentle perspiration." The application is made by having the whole surface of the body and limbs sponged with glycerine and water, in equal proportions, night and morning. "It is probable that glycerine has a twofold action on the skin, both tending to the same end—1st. It softens the cuticle, and removes obstructions from the orifices of the sweat-ducts; 2dly. It possibly acts by inducing the escape of fluid by exosmosis. I have used it in several cases of acute dropsy with albuminaria after scarlatina, with

good results. I have not found it to produce any injurious effects in any case."

22. Dr. Sayre publishes two cases of delirium tremens, successfully treated by the iced-bath, which, though by no means the only ones on record, possess doubtless so much interest for our readers that we reproduce them entire. The first was communicated to him by Dr. Orsamus Smith, of the Hospital at the Workhouse on Blackwell's Island.

"John Wilson, a native of England, 45 years of age, blacksmith by trade, has been in this country fourteen years; he has an excellent constitution, and is remarkably strong and vigorous; was sent to the Workhouse January 19, 1862. Jan. 20th.—Showing no signs of delirium, he was set to work. On the evening of January 22d he became so delirious that we were obliged to place him in a cell by himself, with no medical treatment, for I wished the height of his delirium to have been attained, that I might give the ice-water a fair trial. He became gradually worse until the evening of January 23d, when it became necessary to place a strait-jacket on him. His delirium continued to increase during the night so much, that we were obliged to tie him down. Jan. 24th.—He was now as wild as it was possible for him to be. I had the bath prepared, and sent for Dr. Clark, of the Almshouse. 8½ o'clock, A.M.—The strait-jacket was now removed, and his lungs examined by Dr. Clark and myself, and found perfectly healthy; he was stripped, and placed in the bath-tub, where he was kept nine minutes; the ice was broken into small pieces, and dropped in during the whole time; temperature of the water 38°. His pulse was now 102 beats per minute. 1st minute, no change perceptible; 2d minute, no change perceptible; 3d minute, pulse stronger, and not so frequent; 4th minute, sedative effects very perceptible; 5th minute, pulse 100; 6th minute, sedative effects more marked; 7th minute, pulse 90; 8th minute, pulse 80; 9th minute, patient perfectly quiet. He was now removed from the bath, rubbed dry, and placed in bed, well covered up. Ten minutes after, pulse 72; he lay quiet; talks perfectly rational. Nine o'clock, pulse 85; has stopped talking, and is perfectly quiet. He remained quiet until 1 o'clock, P.M.; did not sleep; then symptoms of delirium again began to show themselves, and increased rapidly until 8 o'clock, P.M. He was again placed in the bath; temperature of the water 38°; pulse 82. He was kept in the water this time twelve minutes. 3d minute, sedative effects marked; 4th minute, pulse slower; 6th minute, pulse 64; 11th minute, pulse 50; 12th minute, he was now on the verge of syncope, and

gasping. I immediately removed him from the bath, had him rubbed dry, and placed in bed, when he soon went to sleep. Jan 25th.—Slept well all night, ate his breakfast, and has again gone to sleep. Jan. 26th.—Slept well last night. Jan. 27th.—Eats heartily; no symptoms of tremor remain. Jan. 28th.—He has gone to work, perfectly well. I am confident that if I had continued the first bath until I had made a more decided impression upon him, there would have been no occasion for the second one; but it was the first time I had ever seen anything of the kind, and I was naturally afraid of so powerful a remedy.”

Dr. Sayre adds that he has used the ice-bath several times with the most satisfactory results, and gives the following from his own practice:

“I was called about 11 P. M. to one of our fashionable hotels, to see a gentleman with delirium tremens. He was under the care of two of the best physicians in the city, and yet he was unable to be composed. Had had no sleep for some time, was perfectly wild, great muscular tremor, and jactitation; pulse 160. He was placed in the ice-bath, and retained there $10\frac{1}{2}$ minutes, when he became quiet; pulse 76. He was then placed in bed, and almost immediately dropped asleep. The nurse was directed to repeat the bath in case he again became wild; but strictly cautioned about the danger, and the necessity of carefully watching the pulse, in order not to produce too great exhaustion. The next morning I called in consultation at 10 o'clock, and found the patient had gone to business. The nurse stated that he slept quiet until 4 A. M., and then began to talk a little wild; he put him in the bath for three minutes, when he became quiet and was put in bed; he immediately fell asleep, and got up at 8 o'clock, perfectly well, ate his breakfast, and went down town to business.

“It is only necessary to refer to the travels of any person in the arctic region, to learn the powerful sedative effect of intense cold; in fact, it is impossible to rouse them up and prevent them from going to sleep. Now this is the great object to be produced in delirium tremens, and in the application of cold we have an agent more powerful than opium, and equally safe if carefully watched.”

23. Under the somewhat singular title of Pulverization of Mineral Waters, says the *London Medical Times and Gazette*, M. Sales-Girons has for some years past been endeavoring to draw attention to a mode of administering mineral waters, by which he asserts that they may, in the form of finely-divided spray, be brought into immediate contact with the broncho-laryngeal mucous membrane. He has had chambers

constructed to facilitate the spraying on a large scale, as also portable apparatus suitable for individual application. His statements respecting the working of his apparatus, and the results obtained, have been strongly contested; and many communications *pro* and *con* having been addressed to the Académie de Médecine on the subject, it desired its Committee on Mineral Waters to make a special report. This M. Poggiale has recently done, reviewing all the publications which had taken place on the matter, and pointing out the very contradictory character of the statements which have been made. In face of these contradictions, the Committee has felt itself called upon to undertake an experimental reinvestigation, and now reports the results.

(1.) *Can Pulverized or Sprayed Liquids Penetrate into the Respiratory Passages?* Experiments upon animals, and upon man, seem to leave the fact of the penetration indubitable, although to effect it is a matter of such difficulty as to render it not surprising that some experimenters have failed in producing it.

(2.) *Do the Pulverized Liquids undergo a Diminution of Temperature on Issuing from the Apparatuses?* They do so; and to avoid this, it is necessary to keep the chambers in which the spraying takes place saturated with the vapor of water, and of a somewhat higher temperature than that of the sprayed fluids.

(3.) *Are Sulphureous Waters Altered in their Chemical Composition by the process of Pulverization?* It is the direct application of sulphureous waters in affections of the respiratory organs that forms one main object of this method; and every one is aware how easily their chemical composition undergoes change, a few minutes' contact with the air sometimes sufficing. From his own experiments and the analyses of various chemists, the reporter concludes that a very considerable desulphuration of these waters takes place under pulverization.

(4.) *In the present state of our knowledge, are the Therapeutic Effects of the Inhalation of Pulverized Liquids determined with any precision?* The Committee was enabled to come to satisfactory conclusions as regarded the penetration, cooling, and desulphuration of pulverized liquids; but it finds itself quite unable to pronounce upon their therapeutical properties; for, while by some observers they are regarded as a most powerful agent in the treatment of diseases of the chest, by others they are declared to be positively injurious. The reporter can therefore only recommend that further careful observations should be made by competent persons.

24. More than ten years ago, Mr. Griffith, one of the Surgeons of

St. George's Parish, Hanover Square, London, published the successful results he had obtained in the treatment of diarrhœa with sulphuric acid. Continued experience with it has, he says, confirmed his views. "In comparison with the acid, opiates are slow in effecting the cure; moreover, they tend to aggravate the sickness commonly attendant on disordered bowels, produce thirst, a dry tongue, and loss of appetite. Whereas the diluted sulphuric acid, given by itself, allays thirst, subdues sickness, arrests vomiting, stops purging; and so rapid is its effect, that it frequently cures by a single dose."

25. The old controversy about the beneficial or injurious effects of mercury in the treatment of syphilis having been revived in many quarters, we must congratulate Dr. Overbeck, of Detmold, on having struck out a new path, viz., that of direct experimentation, by which it is to be hoped that the question concerning the relations of mercury and syphilis may be brought to a final and satisfactory solution.

The chief points of inquiry to which Dr. Overbeck has directed his attention were the absorption of the metallic mercury in the form of mercurial ointment, and of certain other mercurial preparations; and the effects of, and the diseases produced by, mercury. In experimenting with the ointment, which, according to the author, if fresh, is a simple mixture of the finely-divided metal and of fat, and which, if old, also contains oxide of mercury bound to a fatty acid, he traced finely-divided globules of the metal, not only in the skin and cellular tissue, but also in the intercostal muscles, the pleura, the fæcal matters, the kidneys, the liver, the blood, the mucous membrane of the mouth, the fleshy substance of the heart, the brain, and the sediment of the urine, but not in the bones. These experiments were made on cats, dogs, and rabbits, on which part of the thigh, chest, abdomen, or head were shaved, ointment rubbed in, and then a bandage applied, so that the animals could not lick at the part operated upon. The globules found by Dr. Overbeck had generally a diameter of from $\frac{1}{200}$ th to $\frac{1}{2000}$ th of a line, while in the ointment their diameter was on the average $\frac{1}{50}$ th of a line.

The absence of mercury in the bones is a very remarkable fact, which becomes of additional interest by the results obtained in producing the mercurial cachexy in animals. The pith of the whole question pending between mercurialists and anti-mercurialists is, whether there is a difference or not between the symptoms of secondary syphilis and chronic hydrargyrosis. This it seems almost impossible to decide by clinical observation merely; for although many valuable additions have been made to our knowledge in this way, there was

always room left for doubt, while experimental pathology, on the contrary, seems eminently suited for settling the question, in showing the results of the administration of mercury in animals, where not only the symptoms may be observed free from any complications, but where we also have the light of pathological anatomy to guide us in our conclusions.

The most prominent constitutional symptoms following the administration of mercury, observed by the author in the animals on which he experimented, were inflammation of the skin and of the conjunctiva, salivation, inflammation of the stomach and the intestines, hyperæmia of the liver, the kidneys, the urethra, and the salivary glands, and certain changes of the blood. In the bones, however, no trace of hyperæmia, periostitis, caries, necrosis, or any other morbid alterations could be discovered, although the bones of the whole skeleton of all the animals operated upon were carefully examined. There are, therefore, no diseases of bones caused by mercury in animals, and from this the conclusion may be drawn that there are none such in man. Still, it may be objected to this, that pathological phenomena might occur in men which are not observed in animals; and it therefore becomes necessary to argue the question apart for man. The author then gives us a critical summary of the opinions of some of the most celebrated writers on the subject, especially Sir Astley Cooper, Canstatt, Falck, Hermann, Lorrinser, Bonnet, Becker, Otto, Lobstein, Fricke, Virchow, Rokitansky, and others. The circumstance that particles of mercury visible to the naked eye have been observed in human bones, which the author does not question, he explains by assuming that they were only observed after the bones had been macerated; while they never exist in the bones of the living body, nor immediately after death. By putrefaction the blood-vessels, the connective tissue, the fat, the blood-globules, and all albuminous matters are destroyed, and thus the mechanical impediments to the confluence of small particles of mercury are removed. The presence of the metal in macerated bones is, therefore, of no importance whatever. The only bones which may be really affected by mercury are the jaws, in which necrosis undoubtedly takes place after the administration of the drug; but this is evidently due partly to the direct spreading of inflammation from the mucous membrane of the mouth, and partly to the periosteum being laid bare, and brought under the influence of irritants, such as air, etc., whereby inflammation of the periosteum, and subsequent necrosis of the jaw-bones, may be readily induced. This necrosis is, therefore, no direct consequence of mercurialism, but only

an accidental result of a local disease induced by mercury. Mercurialism and syphilis are, according to the author, widely different morbid processes. The essence of chronic mercurial poisoning consists of anæmia; the albumen and the blood-globules being diminished, the coagulability of the blood being increased, while the amount of water may be augmented or diminished. Mercurialism is not accompanied by plastic exudation of any kind, which is the very essence of constitutional syphilis.

We regret being unable to follow Dr. Overbeck further in his important and interesting argumentation, which is, throughout, based on carefully-conducted experiments, and sound criticism of clinical observations, such as on the action of iodide of potassium and chlorate of potash in syphilis; on the effects of sulphureous thermal waters in hydrargyrosis, etc. We strongly recommend his book to the notice of the medical profession of this country, as one which, although it cannot be said to exhaust the subject on which it treats, must certainly be considered as one of the most important contributions to pathology which have appeared for some time.

26. Prof. Chapman esteems the citro-ammoniacal pyrophosphate of iron, named in brief pyrophosphate of iron, administered in the form of syrup [sold extensively in this city] in many persons and states of disease, superior to all preparations of iron, and "perhaps to any drug whatsoever." He gives a very thorough account of its history and preparation, and details with more or less strict scientific analysis half a dozen cases in which he has employed it.

27. The diversity of opinion respecting the merits of the alkaline hypophosphites depends, according to Mr. Taylor, largely on the precise constitution of the salt used. The wide difference in quantity administered as a dose, varying from 5 grains up to 1 drachm, three times daily, points to the same thing. Mr. Taylor found that not more than *two grains* of a pure hypophosphite of potash or soda can be taken for a dose without exciting nausea and a painful feeling within the anterior part of the thorax, much increased by a frequent repetition of the dose; "nor is it surprising that such a feeling should ensue, when it is considered that a hypophosphite is the most soluble oxide of phosphorus in the animal secretions, and is at once admitted into the venous circulation." The method of manufacture, the chemical constitution of the salts, chemical and physiological data and theories as to their remedial action, and numerous cases from hospital and private practice, are given at some length. The ordinary mode of administration consists in ordering a table-spoonful,

three times daily, of a mixture containing from a scruple to half a drachm of hypophosphite of potash, half an ounce to an ounce of compound tincture of gentian, and seven ounces of cinnamon-water, with a little mucilage; and one thing is absolutely needful: "when the capillaries have been excited by hypophosphites in the blood, the daily food should be improved." The author reports that, in many cases, the disease ran its course more rapidly to a fatal termination under the influence of the hypophosphites, through inability of the patient to procure or digest "sufficient nitrogenous and carbonaceous food (containing a due proportion of phosphatic salts) to repair the waste that had been so long enfeebling him." "In these special cases, a large amount of alcoholic food, temporarily supplied, would enable the almost devitalized absorbents to accept phosphatic food." In cases of anæmia, the efficacy of the hypophosphites has been increased by Mr. Taylor by the addition of a salt of iron from a vegetable acid—the citrate, for example. Further he says, creosote, in doses of a quarter to half a drop, is a most valuable adjunct; morphia proves sometimes an indispensable corrective; ethers, the vegetable alkaloids, ammonia, liq. arsenical., and such metallic salts as do not produce decomposition, are not only chemically compatible, but highly efficient combinations, when therapeutically indicated; a very efficient pill may be formed of two grains of hypophosphite of soda or potash, two grains of sugar of milk, one-fifth of a drop of creosote, and one grain of any desired adjunct powder. We shall quote two or three paragraphs more: "The controversy as to the merits of the alkaline hypophosphites has awakened the spirit of research. It has led me to the discovery of the aptitude of these salts for many morbid conditions to which they were previously thought incapable, and probably others are pursuing the same course of investigation—viz., proving facts in reference to their power in augmenting nervous force in the discerning vessels; in increasing the natural, and diminishing morbid secretions; allaying nervous irritation, and implanting the cementing principle which gives force to other elements in the blood that have become defective through the inordinate lapse of phosphates. Examples are to be found in gestation, prolonged lactation, dentition, some forms of dyspepsia, anæmia, catarrhal and leucorrhœal discharges, and in myalgia and the muscular pains simulating inflammation."

"In conclusion, I would say, that I have not the exalted faith of Dr. Churchill in believing that the alkaline hypophosphites can *cure* phthisis in *all its stages*. They remarkably sustain the vital power,

inducing a strong hope of a favorable issue, even under the depressive influence of cavernous ulcers; but in the advanced stage, from the want of the undiscovered antidote to tubercular degeneration, fatal lapses frequently ensue. In the earlier stages, and before vital declension has become a constitutional power controlling every organic function, they have an admirable effect, enabling the best known means to have increased remedial energy, and thus to effect many more cures than formerly."

In another place, speaking of the specific virtue attached by Churchill to the hypophosphites, Taylor says: "Experience has not confirmed this extravagant encomium as respects the '*curative* in every stage;' the word *palliative* would be more in accordance with fact, when the remedy has been pure, and with auxiliary combinations. But in the earlier and middle stages, the guarded introduction of an alkaline hypophosphite into the blood produces a glowing influence—as a respiratory excitant, expanding the chest; as a pyrogenic, increasing animal heat and nervous force, and removing erratic pains; and as a hæmatogen, forming a nucleus for the rallying of red globules: it increases appetite and cheerfulness, and controls expectoration, night-sweat, and diarrhœa." A few pages further, he adds: "And on the whole, if we believe that 'disease is cured by natural processes, promoted by means which uphold vital power, and that our duty is to search for antidotes to morbid poisons, at the same time upholding vital power,' it appears to me that we have in *phosphorus* and its *salts* the best known antidotes for phthisis."

28. In the paper read before the *Société des Sciences Médicales de Bruxelles*, from which we translate, Dr. Van den Corput, Chief Physician to the Hospital St. Pierre, says, from his trials in his practice for over a year of the different compounds of iodine with antimony, particularly the oxyiodide or basic iodohydrate of antimony, he is convinced that the latter is one of the most active 'antimonials.' Reserving for a special and more extended work the detailed results of his clinical observations, he presents a brief but clear account of the modes of preparation and chemical properties, mode of action and therapeutical properties, modes of employment and formulæ for pharmlc combinations of the two iodo-stibiates, viz., iodide of antimony and what he calls oxyiodide or oxydo-iodide of antimony. The former is inappropriate for internal use, but may externally be employed as a revulsive, being similar in such irritant properties to stibiated tartar, while the latter, administered internally, resembles in its therapeutic action, as in its composition, kermes mineral prepared in the wet way,

only that it produces much more powerful special resolute effects. Indeed, it might be termed iodined kermes. It acts as an expectorant and energetic alterant. In doses of 5 to 25 centigrammes [$\frac{3}{4}$ to 4 grs.] it easily provokes nausea and vomiting, or frequent and copious stools. Addition of opiates or other narcotic agent, diminishing gastric susceptibility, of course moderates its action. Tolerance seems to be established as for tartar-emetic, in doses raised from 20 to 50, and even 70 centigrammes in the 24 hours, given in emulsion in a julep of 150 grammes, [4 ounces, $5\frac{1}{2}$ drachms.]

Generally, a severe diaphoresis is first established, which is soon followed by a lessening in frequency and considerable depression of the pulse. The number of inspirations diminish in frequency, and these effects are accompanied by profound muscular enfeeblement. On account of the profuse transpirations it induces, and the great hyposthenization it entails, this medicament is very rarely applicable in confirmed pulmonary tuberculosis; but in inflammation of the parenchyma of the lungs, in the second stage of pleuro-pneumonia, in "suffocative" catarrh, acute subacute bronchitis and pulmonary œdema, it renders, says Dr. Van den Corput, signal service. We shall speak of these stibiated iodides at greater length in another place, and give to our readers the numerous formulæ that Dr. V. promulgates for their administration.

29. One of the most recent proposals for substitutes for quinine is that of Prof. Gastinel, of the Medical School of Cairo, of two new arsenical compounds, which he presented, in a perfect state of crystallization, to the Egyptian Institute, last year. They were respectively Arseniate of Caféine and Tanno-arsenious Acid. Dr. Schnepf, of Alexandria, who was appointed to report on their therapeutic power, has already used the latter in several cases, in the daily dose of 20 centigrammes in 20 spoonfuls of water, every quarter of an hour a spoonful, with remarkable success.

30. We report here a simple and quite ingenious improvement on sutures, which, though falling more strictly within the province of our colleague, the reporter on Surgery, we need make no apology for introducing, as it may in some cases be serviceable to our readers. Mr. Higginson claims that "it not only does away with one of the most painful parts of an operation—that of putting in the sutures—but also assists in the quicker healing of the part; not being attended with that inflammation which must, to a certain extent, be set up by the suture acting as a foreign body, no matter of what material it may be made of; but it also gives support to the neighboring parts,

and instead of the dragging force which is employed by the suture keeping the surfaces together at the particular point where it is introduced, from the natural tendency of the lips of the wound to gape asunder, this force is extended over a large surface." The plan merely consists in applying an adhesive strip [prepared by Mr. Higginson by "spreading chamois leather, or such resisting substance, with lead plaster, rather thickly, so as to retain a good hold, and by cutting this into strips of a sufficient width, and having heated it," but we think the very superior sticking plaster now manufactured for the mechanical treatment of joints would answer admirably,] along each margin of the wound, coming almost to the edge, and stitching these strips together. "This plan enables you to examine the wound without having to remove anything but the external dressings; the plaster not being applied exactly at the edge, leaves a space through which you can see whether the surfaces have united or not. It is very serviceable in amputations of the breast, or such parts where the cuts are generally regular; it might even be found practicable in flap or other operations, if the plaster was cut of a proper shape."

REPORT ON OPHTHALMIC AND AURAL DISEASES.

By WM. FREDERIC HOLCOMB, M.D., Prof. of Ophthalmic and Aural Surgery in the
New York Medical College and Charity Hospital.

1. *Myopia—its Causes and Treatment.* By M. VAN ROOSBROECK. (Bulletin Gén. de Thérapeutique Méd. et Chirurg. Rev.)
2. *Abscess in Vitreous Humor.* By J. G. HILDIGE. (Medical Times and Gazette.)
3. *Medical Treatment of Secondary Capsular Cataract.* By Dr. MIRAULT, of Angers. (L'Union Médicale.)
4. *New Method of Treating Cataract.* By Dr. SPERINO, of Turin. (Dublin Medical Press.)
5. *Entropion Cured by a New Operation.* (Dublin Medical Press.)
6. *Hemeralopia, or Night-Blindness.* By Dr. BAIZEAU, of the French Army. (Journal de Méd. et Chirurg.)
7. *Abscess of the Brain from Ear Disease.* By M. RICHET. (Gazette Hebdomadaire.)
8. *Exophthalmos from Inflammation of Areolar Tissues of Orbit.* (London Lancet, January, 1862.)
9. *Fixing the Eye during the Operation for Cataract.* By J. G. HILDIGE. (Dublin Hospital Gazette.)
10. *The Treatment of Fistula Lachrymalis by Induced Suppression of the Lachrymal Ducts.* By C. H. DEVAL, M.D. (Medical Circular, Jan. 1, 1862.)

1. *Myopia—its Causes and Treatment.*—In the great majority of cases, myopia does not exist in a healthy condition of the eye, but is the consequence of an elongation of its axis, produced by posterior staphyloma. This staphylomatous condition is the result of posterior sclero-choroiditis, the first effect of which is softening and atrophy of the parts, and, as the walls become thin, the vitreous humor presses them outward posteriorly. The tumor may, after having acquired a certain size, remain stationary. Sometimes, if the disease is located around the optic nerve, it progresses, causing destruction of the choroid and separation of the retina, with consequent incurable blindness.

Myopia progresses in proportion to the posterior staphyloma. It occurs before puberty, and may not increase after its development, but may go on gradually till the age of thirty, then become stationary; or it may continue to progress even to an advanced age. Myopia, progressing beyond the ordinary period, augurs unfavorably. If the sclero-choroiditis is recognized early, it is amenable to treatment, and cure is nearly certain. The staphyloma can be easily recognized with the ophthalmoscope, and though when once formed it never recedes, its early recognition enables us to act with certainty at a moment which, if passed, may lead to amaurosis.

The most common cause is over-use of the eye. Hence we find that tailors, seamstresses, workers on lace, and students, are subjects of posterior choroiditis and consequent myopia. When a person begins to complain of uneasiness in the eye, and indistinct vision, instead of going to an optician and procuring glasses, which may temporarily enable him to see clearly, and thus use the eye to its increased detriment, he should consult a physician who can examine with the ophthalmoscope, and institute the proper course of treatment.

Absolute repose, derivatives to relieve the congestion, cooling applications to the eye and temple, the frequent application of a weak solution of atrophine, leeches, or dry cups to the temples, will tend to arrest the disease.

If it has progressed beyond the age of thirty, it will seldom be checked, but go on to old age. In such cases, the use of proper glasses, that is, those neither too strong nor too weak, will enable the patient to use the eye for the ordinary business of life. Generally, a pair is required for near objects, and another for distant ones. If there is much amblyopia, great caution must be exercised in using the eyes; if used at all, intervals of rest should be frequently allowed, and at night the brilliancy of the light should be modified by colored shades.

NOTE.—The translator would increase the caution given above in regard to *repose*; it must, indeed, be *absolute*. Many physicians unwisely advise traveling for restoring such eyes. It is certain, if a man travels, he *must* use his eyes. In cases of patients sent to Switzerland, the ascension of Snow Mountains has often resulted in permanent injury of vision. Even riding in rail-cars in our own country in summer, will, if continued for days, almost certainly create a conjunctivitis. In traveling over our Northern States in winter, the dazzling light reflected from the snow will sometimes bring on retinitis. Hunting, fishing, cannot be indulged in, and even walking in towns where houses built of light-colored stone, (as in Paris,) reflect a most trying light, will materially increase progressive posterior choroiditis. *Absolute rest* must be enforced, and this can be secured only by remaining in-doors, where the light is moderate, taking open-air exercise only in cloudy weather—or, if in clear, only before sunrise or after sunset.—H.

2. *Abscess of the Vitreous Humor*.—John W., aged 58 years, of sanguine lymphatic temperament, was attacked with inflammation of left eye, and when first seen, the lids were exceedingly tumefied, with extensive chemosis, cornea opaque, very severe pain in orbit, so as to prevent sleep for the last fourteen days. The patient was salivated, blistered on the temple, without benefit; as he was much reduced, the eye was extirpated. Examination showed the eye much enlarged in all directions, with the cornea tending to staphyloma. A transverse section revealed an encysted abscess of the size of a small pistol bullet, containing healthy pus. This cyst was partially attached to the ciliary body, though posteriorly and laterally it was free. The vitreous humor was free from pus-globules, but was opaque in the vicinity of the cyst. Complete synechia anterior, occlusion of the pupil, lens, and capsule opaque; choroid and retina normal. Mr. Hildige regarded the abscess as the result of inflammation, either of the ciliary body, or of the vitreous humor itself, excited by inflammation of the surrounding parts.

3. *Medical Treatment for Secondary Capsular Cataract*.—Dr. Mirault, of Angers, advises the employment of medical rather than surgical means for the removal of secondary cataract. After extraction we should be on the watch for this, and if any opacity presents itself, it should be immediately combated by severe antiphlogistic

remedies. Bleeding, general and local, internal and external revulsives, with belladonna and mercurial frictions. Dr. Mirault affirms to have found this treatment successful in many cases in less than eleven days.

4. Dr. Sperino, of Turin, states that he has found in cases of individuals suffering from cataract, that if the aqueous humor be evacuated daily, or every two or three days, the lens gradually recovers its pellucidity, and the sight progressively improves. Dr. S. is about to publish an account of the researches which led to his discovery of this method, and the success which has followed it.

5. It has lately been proposed to divide the tensor tarsi muscle between the superior puncta lachrymalis and the caruncle, for the relief of *entropion*. Much benefit is reported to have followed this treatment.

6. *Hemeralopia, or Night-Blindness*.—Dr. Baizeau, of the French army, observed an epidemic of this disease, in 1856, which broke out March 28th, and during April many cases occurred. The division changed location in May, when it became more frequent, but ceased at the end of the month, reappearing after a few days. The disease followed the army to Marseilles, but attacked only two companies, which were under canvas. It disappeared as winter approached, and again returned in January. In May, 1857, Dr. Baizeau observed it in the army at Paris, but it disappeared in July, 1858. The disease seldom endangers vision, but may entail serious consequences in the case of men to whom the guard of an important post is assigned at night. Gen. Bazaine stated, that so many of the men were affected with this disease at Sebastopol, that several regiments were reduced so as to be unable to supply the usual guards. Dupont (in 1772) states, that several sentinels of the army of Strasbourg, affected by this disease, fell into the ditches at night. It attacks both land and marine forces, but is generally confined to privates. Out of three hundred cases, Dr. Bazeau found only three officers. Sudden changes of temperature are most liable to bring on this night-blindness. Dr. B. advises that during warm weather the soldiers should be drilled in the shade, and at night wear the hooded overcoat. M. Fleury proposes that sailors should wear broad-brimmed straw hats with a green shade beneath the brim, and that tents be used on deck at night. When first attacked, the men should be exempt from all duty; this, in nine cases out of ten, will bring about a cure. But if the disease has advanced, the azure-tinted glasses may be worn, as advised by M.

Sichel. Fomentations of hot water, cod-liver oil in six or eight drachm doses on an empty stomach in the morning, mild counter-irritants, aperients, stimulating foot-baths, dry cups, and scarifying, if necessary, make up the sum-total of the treatment.

7. *Abscess of the Brain from Ear Disease.*—M. Richet received a patient at the Hospital St. Louis who had slight otorrhœa. He had suffered little from the ailment, but on the following day, when in apparent health, he was seized with a convulsion, and died. At the autopsy, the petrous bone was found diseased, but the dura mater was healthy. The tympanal cavity was filled with pus. All the convolutions of the left hemisphere were effaced, and a collection of pus occupied the whole of the sphenoidal and occipital lobes; the parietal alone remaining intact. The patient had not manifested the slightest intellectual disturbance, and no symptom indicated cerebral lesion, when the pus, bursting into the lateral ventricle, caused instant death.

NOTE.—Two cases of caries, and consequent perforation of the temporal bone, resulting in death, have fallen under my observation. The case of a child aged eleven years, admitted into St. Joseph's Hospital, in Prague, Bohemia, was most interesting. The patient had a very strumous constitution, and had suffered, from infancy, from otorrhœa. Little attention was paid to the ears, except to syringe them frequently, in order to diminish the fœtor they caused throughout the ward. The child was considered stupid, and towards the last, as it seemed much inclined to sleep, it was thought to have tubercular disease of the brain. The glands about the ear were much enlarged, and two or three days before death, the ear and parotid region presented a gangrenous appearance. At the *post-mortem*—which was conducted hastily, in consequence of the intolerable stench emitted on opening the cranium—the base of the brain was found softened, floating apparently in a bed of pus. Having paid special attention to the case during life, I was desirous of examining the internal and middle ear. Not only was permission granted in this case, but the rare privilege was accorded by Profs. Lambl and Löschner, of examining all who died during four months having any serious affection of the ear. On detaching the softened dura mater from the temporal bone of

the left ear, I found a perforation leading from the upper portion of the mastoid cells, opening about three-fourths of an inch *outward* from the superior semicircular canal, into the cranial cavity. The temporal bone was carious throughout. The glenoid cavity, the condyle and ramus of the jaw, were nearly destroyed. The tympanum was gone, but the ossicula remained intact. The internal ear was not opened, as it was obvious what amount of disease existed, from the fact that the nerves were softened, and foetid pus was exuding from the numerous foramina. There had been facial paralysis of the left side. There was otorrhœa of the right ear; the drum was gone, but caries had not commenced. A similar case was lately reported at the New York Pathological Society. If perforation or trephining into the mastoid process is ever warrantable, it would seem to be in these cases. The long-neglected disease undoubtedly extended from the middle ear to the mastoid cells, where there are numerous foramina for the passage of blood-vessels, through which the pus found its way into the cranial cavity. *Wilde*, in his work on "Diseases of the Ear," (page 401 of the American edition of 1853,) speaks of a very similar case reported by Dr. Graves. These cases should warn us not to neglect "running from the ear," but to examine with care the tympanum and middle ear, and treat them while amenable to cure.—H.

8. *Exophthalmos, from Suppurative Inflammation of the Orbital Areolar Tissue—Sloughing—Recovery.*—Rosina M., aged 17, was admitted into St. Bartholomew's Hospital on the 18th of July, suffering from erysipelas of the right side of the head and face. This subsided, leaving the right upper eyelid swollen. Suppuration took place, and the abscess was opened by the house-surgeon. A quantity of pus escaped, but the wound did not heal. Dr. Burrows, whose case it was, requested Mr. Coote to take it in charge. He found the eyeball much protruded, and everted on its axis. Large doses of steel were ordered, with good diet, wine, etc., and the patient was directed to walk about the court of the hospital. The sight was much disturbed. On the 24th of August, while the patient was bathing the eye, she pulled out two sloughs of areolar tissue of considerable size, evidently from the back of the orbit. This was followed by a gradual recession of the eyeball, with improvement of sight, and the wound in the eyelid seemed disposed to close. On

the 7th of September a third and smaller slough made its way out, and by the 23d, the eye had in a great measure regained its natural position: The patient shortly after left the hospital.

9. "*Fixing the Eye during the Operation for Cataract.*"—It must be obvious to every prudent surgeon, that an eye on which the operation for cataract is about to be performed, should be absolutely fixed and steady; for although an operator, after long practice, may acquire a dexterity which will enable him to operate successfully nineteen times out of twenty without the eye being fixed, yet the truthfulness of the remark made by *Larrey*, that "nothing in surgery should ever be abandoned to chance," must be acknowledged to be peculiarly applicable to the case to which we refer. Of the different instruments made use of by ophthalmic surgeons for the purpose of fixing the eye, may be mentioned the "*Pique de Pamard*," employed principally in France; "*Désmarres' Thimble*," seldom had recourse to; the double "*Ophthalmostat*" of Edward Jäger, made use of chiefly by that gentleman himself; and lastly, a pair of common toothed forceps.

The "*Pique de Pamard*" is employed in the following manner: It is inserted into the conjunctiva at the inner angle of the eye, a little above the transverse diameter of the eyeball, and at a distance of about *two lines* from the cornea. It is not necessary to introduce it so far as its transverse portion, which, according to *Désmarres*, is of no use whatsoever. As soon as the *counter-puncture* is made, the instrument of course becomes almost useless, as the eye is then maintained sufficiently steady by the knife of the operator. *Désmarres' thimble* is constructed in such a manner that it can be adapted to the upper part of the middle finger, so that the operator can himself depress the lower lid, and regulate the amount of pressure necessary to control the movements of the eye. As the sides of the instrument separate from each other with facility, it can be adapted to fingers of different sizes. The "*ophthalmostat*" of Edward Jäger is a most useful instrument, and controls the movement of the eye much more effectually than either of those recommended by *Désmarres*; the only objection to its use being, that it is apt to produce inflammation of the conjunctiva, besides not being well borne by the patient. The instrument consists of two small forceps, which are held constantly open by means of an elastic spring; the branches of each unite inferiorly in one arm. The conjunctiva is seized on each side of the cornea, and a little below the transverse diameter of the eye, with the

instrument, which is held in the right or left hand, according to the eye which is to be operated on. Dr. Jäger states that he has continually used this instrument during the space of three years in all sorts of operations on the eye—viz., extracting foreign bodies, making artificial pupils, as well as in cataract operations—and that he has never found the more deeply-lying tissues and organs to have been in the least injured by it. An instrument which has almost completely superseded all others, particularly in these countries (?) and in Prussia, is the common toothed forceps; in fact, with it we can seize the eye more readily, and with less annoyance to the patient, than with any of the others I have just described. Mr. France, in alluding to this mode of fixing the eye, says: "Indeed, the importance of fixing an eye effectually can hardly be exaggerated; for, from the spasmodic or instinctive movements of the organ, arise the accidents to which the operation is obnoxious. It is not, of course, disputed for a moment that the operation performed in the ordinary way by competent surgeons is, in the great majority of cases, successful in restoring sight; but still, as even in the best hands casualties will occasionally occur, and render more precarious or less perfect (when it does not absolutely prevent) the favorable result, an unobjectionable means of obviating the chief cause is a great desideratum, and cannot but conduce materially to enhance the average of success." Mr. France appears to have been the first to have suggested this method of holding the eye in these countries, (*vide* Guy's Hospital Reports for 1858,) but the practice was not, at the time he wrote, by any means new on the Continent. As far back as 1854, Von Graëfe used the toothed forceps for cataract, and, if I remember aright, had taken the idea from one of his predecessors. It was not considered novel during my visit to his clinique in the years 1855–6. Mr. France seems not to have been aware of this. (*Vide* Guy's Hospital Reports for 1858–60.) In the year 1855 Rothmünd and Nüssbaum, at Munich, were also making use of the toothed forceps in operations for cataract; and about the same period, Jünge, an assistant of Von Graëfe, introduced the method into Russia: so that it was known and practiced on the Continent four or five years previous to the period at which Mr. France first described it in England.

NOTE.—The skill of the operator must be great in any case, but local physical conditions often render some cases very embarrassing. A very shelving supra-orbital ridge; a small sunken bulb, or a very large protruding one; a conjunctiva

which is soft and friable: in connection with these, to have assistants who do not quickly appreciate and lack skill to foresee and avert danger, will often defeat the best surgeons. Hence it is almost absolutely necessary to have always the same assistants. In *extraction* of cataract, Sichel, of Paris, never holds the eye with any instrument, but sustains it by the balls of the index and middle fingers. Désmarres rarely uses anything to steady the bulb in cataract operations, but occasionally, however, he employs the "pique de pamard;" I have never seen him use his "thimble." Roux, like Sichel, always held the eyeball with the fingers. Velpeau, Chassaignac, Nélaton, rarely use anything to hold the bulb in operations by extraction. Prussian oculists generally fix the ball with forceps. Arlt and Stellwag Von Carion discourage the use of all ophthalmostatic apparatus, as did also Mackenzie, and Tyrrell does not refer to this point. The reason urged by some of these surgeons against fixing the ball is, that in case the assistant fails to hold the upper lid and the patient becomes unmanageable, it is often difficult to remove the forceps. I have frequently seen the patient, by a sudden motion, tear away the portion of conjunctiva held between the teeth of the spring forceps. In using the broad needle with a guard, that is, the "pique de pamard," it can be removed instantly in case of necessity. *Spring* tooth forceps, *properly* made, can be removed in a moment by a good assistant. I have never seen any ill effects from their use, though the bite of the teeth is at first very disagreeable to the patient. I first saw them used in Paris, in 1851. I prefer them to anything else, when any instrument is required. The communication of Mr. Hildige is of great importance, as very little has been written on this subject in English surgical works. Though many advise "fixing the eye," they do not advise what method to employ. The whole gist of the question turns on the opinion of the surgeon in regard to the advantages and disadvantages of controlling the bulb by any means other than the fingers. Young surgeons are too prone to follow example rather than reason. Students and medical men are guided by the advice of their teachers and those whom they esteem as operators. This is also true in respect to countries. All Prussian oculists are inclined to fol-

low the teachings of Jüngken and Von Graëfe, (father and son,) and others of their great men. The Austrian teachers and leaders are Jäger, (father and son,) Arlt, and Hasner; and they are followed in Southern Europe. Donders is authority in Holland. Sichel and Désmarres are the *oculists* of Paris, while the great *surgeons* of that city look upon oculists with a sort of contempt, and differ among themselves as to the major and minor points of operations. In ophthalmic surgery, the English mind is moulded by Critchett, Bowman, and others. In Ireland, by Jacob and Wilde. In Scotland, the sound teachings of Mackenzie remain as a guide. In America we follow no one, but glean what we can by observation at home and abroad, and act independently. *Specialists*, and particularly *oculists*, have been regarded in America as charlatans and itinerant humbugs, and none, until recently, were willing to incur the opprobrium customarily attaching itself to this branch of surgery. At no very distant day—one generation at the farthest—the opinion of American *specialists* will be regarded with respect. Our contemporaries, J. Marion Sims and Horace Green, have already acquired “distinguished consideration,” if not enduring fame; not at home only, but among the *savans* of Europe. One thing is *certain*: we shall be jealous of no neighbors. In France, *German* surgeons are regarded as second-rate, while the Germans will scarcely ever allow that anything *French* can be reasonable and philosophical. English, Irish, and Scotch doctors each regard *themselves* with great satisfaction, but speak of each other with a curious complacency, indicating that they think they know at least as *much* as their neighbors; and finally, all Europe looks upon American doctors and their opinions—in general—with a sneering pity. It might, perhaps, benefit us and them, if they were to visit America and examine for themselves. Here, as in Europe, there are numbers of eminent men who have scarcely written anything since their theses were completed. Maisonneuve once said to his class, “that the majority of medical books are written before their authors have had any experience, and after a reputation is gained, there is no time for anything but practice.”

Let us not, therefore, rely too much on books, but observe, think, and judge for ourselves.—H.

10. *The Treatment of Tumors and Fistula Lachrymalis by Induced Suppression of the Lachrymal Ducts.* (From a Practical and Theoretical Treatise on Diseases of the Eye, now in course of publication.)

Of all diseases which form part of the external pathology, tumors and fistulas of the lachrymal apparatus are, perhaps, those which have led to the greatest number of surgical operations. We have advocated, in their turn, injections by the upper duct, (Anél's method,) and by the lower, (of Laforest de Gensual,) the progressive dilatation of the nasal passage by foreign bodies of all kinds, (of Ware, Bowman, etc.,) its permanent dilatation with metallic tubes, (of Foubert and Dupuytren,) the establishment of a passage for the fluids by the perforation of the os unguis, (of Woolhouse,) or from the upper maxillary, (of Langier,) the suppression of the secretory apparatus, (of Paul Bernard,) or the excretory of the tears, (Nannoni's method,) and others. My practice formerly was limited to the following:

First.—Medical treatment in those cases in which I might reasonably hope for success without having recourse to other means.

Second.—Temporary dilatation by means of catgut and lead nails in cases in which medical treatment failed, or was judged from the first insufficient.

Third.—Perforation of the unguis in case of incurable closure of the nasal passage.

Fourth.—Destruction of the sac by means of caustics when closure threatened the last duct and lachrymal passages, the sac being transformed into a regular cyst.

Struck by the non-success of temporary dilatation at the end of months and years of patient trial, I have simplified my manner of proceeding, and have reason to congratulate myself on the success of my plan. At present, I usually counsel medical treatment in those conditions already known to the reader; in all others, I advise abolition of the sac.

1st. *Actual Caution.*—The destruction of the lachrymal sac with hot iron is by no means a modern invention. Such was the practice of Avicenna, of Albucasis, and of all the Arab surgeons. Celsus recommends, Book 7, Chap. 7, catching with a hook the tissues surrounding the fistulous orifice, and removing them until the bone is exposed, which should be immediately cauterized with the hot iron. The obliteration of the lachrymal passage by actual cautery was practiced

in the second half of the last century by Laurent Nannoni, of Florence, who followed in this respect the precepts of his father, Ange Nannoni; he generalized the method which at present occupies our attention, and for its realization, employed lunar and chemical caustics. M. Désmarres, who has performed a good many operations of this kind, advises for their execution the employment of a round cautery, "la tête de Moineau," of Ambroise, Paré.* Having used it several times, I can say it fully answered the purpose intended. The operation is, besides, very easy, and is completed in two visits, opening the sac and uction of this reservoir. The incision should be longer in those cases in which it is proposed to introduce a nail or quill, etc. M. Désmarres says about three centimetres; that is, one above the orbicular tendon, in which it is necessary to make an incision, and two below. Such an extensive incision enables us to cauterize effectually the whole surface of the affected sac, and prevents those relapses which would often recur were it not for this precaution, particularly in the *cul-de-sac*, situated in the tendon of the muscle.

Having opened the sac according to the method employed by J. L. Petit, I pass a fluted sound under the cord of the tendon and cut it, as well as the tissues surrounding it above, by sliding the bistoury on the groove of the conductor. The actual cautery may be put off till the following day, or the day after; but I always prefer proceeding with it at once, as we thus satisfy the natural impatience of the patient, and avoid the swelling of the tissues, which I have in some cases observed after the first incision. The patient must be in bed, and all flow of blood stopped before proceeding to actual cautery. The iron should be at a white heat. This is better done in the fire than in the flame of a spirit-lamp. I have sometimes been obliged to begin the operation anew, by heating the iron at the fire, the first attempt at the lamp being unsuccessful. The cauterization should be confined to the interior of the sac, in that part surrounded by a partition of bone. Burning the skin would cause severe pain, and what is more to be dreaded, an ugly cicatrix, and frequently extroversion of the lower eyelid towards the great angle. To succeed, assistants must hold the edges of the wound widely apart with hooks. While the eye of the patient is covered with a piece of wet linen, the surgeon, who holds the cautery in the right hand, sweeps it boldly from the upper part of

* The cautery used by Désmarres is not like "tête de Moineau of Paré," which is a cautery, shaped like a *sparrow's* head. In Désmarres', the *beak* is longer, and is more like the head of a humming-bird.—H.

the gaping cavity to the opening of the nasal passage. During the twenty-four or thirty-six hours following the operation, cooling fomentations must be applied. Later, a dressing of linen covered with cerate is sufficient. The cure is effected at the end of two or three weeks.

2nd. *Application of Caustics—Emploi de la pâte de Canquoin**—Although the preceding expedient furnishes excellent results, it has some inconveniences. It is very alarming to the patient; and after this unusual operation, the surgeon may have to deplore an event such as happened in one of our hospitals, namely, the death of the patient from erysipelas of the face. The section of the tendon of the palpebræ, and the long incision which this proceeding requires, causes a more disfiguring cicatrix than a wound less extensive, and it is usually after the actual cautery that I have observed in the region of the sac a very disagreeable scar. These considerations have induced us to substitute for actual cautery chemical caustics, which, well employed, produce cures equally prompt and lasting. I proceed, generally, in the following manner: Systematical incision of the sac, the orbicular tendon remaining intact; bathing with a sponge and cold water: when the flow of blood has ceased, we take a stick of Pâte de Canquoin, No. 1, about the size of a crow-quill, and cutting a piece about eight to ten millimetres in length, (*i. e.*, 3 to 4 inches,) it is introduced deeply into the sac. This is afterwards covered with lint kept in place by a bit of court-plaster, and the eye covered with a shade. The patient is ordered home (in a carriage, if possible,) and the severe pain gradually moderates. Twenty-four hours after, remove the plaster and the lint, and draw out the detritus of the pâte with Davil's scraper. Same dressing as before. The eschar is of a grayish-black color, at first very decided; the wound is surrounded by an areola of a red color, which is sometimes œdematous, and often spreads over a large part of the lower eyelid; it might at first sight be taken for erysipelas, but it is merely the effect of cauterization. In all cases, the patient must be warned against exposing himself to cold, because extensive inflammation of an erysipelatous nature might be brought on by imprudence. When such a thing has occurred, however, it has been speedily checked by the most simple means, and has never prejudiced

* "Pâte de Canquoin" is an escharotic formed by mixing chloride of zinc, one part, and flour, two parts, mixed with water and made into a flat cake, and cut into strips to suit convenience. This is called No. 1; No. 2 has flour three parts; No. 3, flour four parts; No. 4 has five parts to one of zinc. No. 1 is the No. usually employed.—H.

the success of the operation. The eschar comes away at the end of twelve or fifteen days; the fall of the "parties sphacelées" is soon followed by cicatrization, which always takes place from the eighteenth to the twenty-first day—sometimes sooner. The appearance of a pimple in the region of the wound may render cauterization necessary for the excision of the fungous growth. By degrees the integuments become supple, and the cicatrix gradually disappears. Our treatment is now confined to keeping the wound from contact with the air, and to drink some tumblers "d'eau de Pullna," (*i. e.*, a saline purgative similar to pulv. Seidlitz,) if, as I have sometimes found, the tongue becomes *suburrale*, (*i. e.*, foul.) The patient should call every two or three days. Such is the simplicity of this treatment, that having operated on the 17th of September, 1859, on a woman in the "Hospital for Incurables," she did not appear till three weeks afterwards, and then only to show that she was cured. "La pâte de Canquoin," when prepared a long time before being used, is much slower in action, and also more gradual and efficacious, and at the same time producing less pain. This is the result of practical observation, and as it is known that this preparation causes great pain, everything which tends to lessen it should be received with favor. Experience has shown us the favorable influence exercised by caustics of this kind in cases of deterioration of the bony tissues. The application of "Pâte de Canquoin," therefore, in lachrymal affections, even when accompanied by caries, may be very efficacious. An objection to the plan just described may be urged—the *wateriness*—which the persistence of the lachrymal gland must render incurable, which is an inconvenience common to all the expedients connected with the method in question. Experience has proved that if the flow is sometimes great, in other cases it is so slight as to cause no inconvenience to the patient, and very often disappears altogether. The possibility of the resumption of the lachrymal fluid by the absorbent vessels, in the absence of the free play of the tubes destined to contain them, is corroborated by the observation of all surgeons who have practiced this method. As M. Stoeber has very justly remarked, the stopping of the flow after the destruction, as well as after the cure of the sac, is explained, if we admit that, in the normal state, the secretion of tears is not sufficiently abundant to allow of a permanent flow into the nostrils, and that there is no watering in "lachrymo-blennorrhées," but because the irritation of the sac is communicated to the conjunctiva and the lachrymal gland, and augments the secretion of the latter. M. Tavignot says he has noticed a tendency in this flow to continue when the la

chrymal tumor has been of long standing; the sympathetic reaction of the inflamed sac on the gland having caused a habit of *hyper-secretion* which we must expect to last long, but not indefinitely. I have destroyed many of these sacs with chloride of zinc, but have given up its use, because, being more energetic than the "Pâte de Canquoin," it is not so easily managed, and is more dangerous, sometimes making larger scars than is at all desirable. To apply it, take a piece of the size of a small pea and place it in a quill about two centimetres long; above the caustic in the tube some bits of lint and wet paper are placed; the sac being opened and the parts well cleansed, the quill is introduced as far as the os unguis, the caustic being applied to this bone. A little stick fitting the quill, like a syringe, is used to push the chloride and the lint into the sac; the quill is then removed, and lastly, the stick which has held the caustic and dressing in place against the anterior wall of the sac. A large piece of lint is immediately introduced, to prevent the chloride from mixing with the tears and cauterizing the lips of the wound. The eye is then bandaged, and the patient remains in this position for half an hour. At the end of that time, cold water in large quantities must be injected into the sac, in order to prevent cauterization of the lips of the wound from the continued solution; a very important point in the operation.

Lunar caustic, recommended by Lallemand and a great number of surgeons, does not appear to me to be energetic enough to accomplish the end in view in operations of this kind. Rosas and Drs. Magne and Gosselin employ butter of antimony; M. Stoeber, caustic potass.

NOTE.—I forbear adding anything to lengthen this communication. But as my experience has taught me that Bowman's method does not produce a permanent cure in the majority of cases, I will only give my testimony as regards this plan, of which I had such strong hopes. I have seen *Désmarres* use the oxide of zinc treatment, but it is severe, and it often leaves ugly scars. He employed it first at the suggestion of Jungken, of Berlin, about fifteen years since, and speaks of its use in high terms. As to the *pain* caused by the hot iron, *Désmarres* says "it is very little, and not to be compared with that produced by the caustics; and it has one great advantage, viz., the pain ceases when the cautery is removed." I have never seen the lachrymal duct cauterized with the hot iron, but from observing its use elsewhere, and the testimony of those who have employed it for fistula lachrymalis, I feel strongly inclined to make a trial of it.—H.

Report of a Committee of the Associate Medical Members of the Sanitary Commission on the Subject of Pneumonia.

(Continued from page 221.)

The indications which have reference to the second stage of pneumonia are now to be considered. And it is to be borne in mind that this stage occurs in the vast majority of cases, and often speedily follows the attack. The change, as regards the indications, renders it important to determine when the disease has passed into the second stage—in other words, when the solidification of the affected lobe has taken place. The physical signs of solidification (bronchial respiration and bronchophony) afford reliable evidence on this point. The absence of chlorides in the urine, also, may be relied on with considerable, but not implicit, confidence, that the process of exudation is going on.

In the second stage, so far as the local affection of the lobe primarily involved is concerned, all the mischief which, in the majority of cases, may be expected to occur, has already occurred. The only untoward events (exclusive of complications) which are to be apprehended are the invasion of other lobes, and possibly suppuration and gangrene. The probability of the invasion of another lobe cannot be determined, and, if this were possible, the prevention does not lie within the scope of our resources. What, then, are the objects of management in the second stage of pneumonia?

It may be assumed that blood-letting is not indicated in the second stage. The nauseant and arterial sedatives may be indicated by the persistence of high febrile movement in certain cases; but they are to be employed with even greater circumspection than in the first stage, and they are not to be given for other objects than those already stated. In a large proportion of cases they are either uncalled for or contra-indicated in this stage.

In order to answer the inquiry just made, let it be asked, What are the requirements for recovery in the second stage of pneumonia? So far as the local affection is concerned, the exudation is to be removed; in other words, resolution is to take place; and, as regards the general condition, the powers of life must be adequate to carry the patient through the processes of restoration. The objects of treatment must relate to these requirements. The question, then, is, What can be done to promote resolution of the local affection, and what to aid the powers of life to effect recovery?

First, as regards resolution of the local affection. Antimonial preparations have been considered to contribute to this object. Laennec, ascertaining by means of physical exploration the rapid disappearance of solidification under large doses of tartar-emetic, was led to extol this remedy. But at that time cases of pneumonia without any active treatment had not been observed. It is now certain that the solidification may disappear with great rapidity, not only under different remedies, but when no remedy is given. Laennec and others naturally enough mistook for the effects of medication the changes occur-

ring in the natural course of the disease. With our present knowledge, preparations of antimony are not indicated for the object under consideration. Given for this object, when uncalled for or contra-indicated by circumstances relating to the general condition, they are not merely superfluous, but hurtful remedies—the injury, of course, being proportionate to the extent to which they are given.

It is not long since physicians generally deemed it important to give mercury, with a view of promoting resolution, and to push this remedy to ptyalism. But clinical observation has sufficiently shown that absorption of the exuded matter goes on as well without as with mercurialization. There is no need, therefore, of incurring the depressing effects of this treatment. And if mercurialization be not needed, it is certainly not devoid of harm; for every active remedy is potent either for good or evil, and, if not useful, it can hardly fail to be hurtful.

Blisters are still too often employed in pneumonia in order to hasten resolution. There is no evidence that they contribute to this object, and they are highly objectionable on account of the annoyance and irritation which they are likely to occasion. Moreover, they interfere with the daily examination of the chest, by means of which alone accurate information respecting the condition of the lung is to be obtained.

Remedies to promote expectoration are sometimes considered as important. This is probably based on the idea that the expectoration contributes to the removal of the solidifying exudation—an idea already stated to be erroneous. Clinical observation shows that resolution may go on with great rapidity without any expectoration. It is true that an accumulation in the bronchial tubes takes place in some cases, towards the close of life, and doubtless contributes to a fatal result; but the accumulation is due, under these circumstances, to a degree of asthenia, impairing the muscular power necessary for the acts of expectoration, and expectorants are not adequate to afford relief.

In short, it may fairly be doubted if, with our present knowledge, we are able to expedite resolution by any measures employed directly and specially for this object. There are grounds for believing that measures having reference to the general condition of the patient are the most efficient means of acting on the local affection.

Second, as regards measures having reference to the general condition of the patient. The most important of the principles of treatment in pneumonia fall under this head. Resolution of the local affection may take place more or less slowly, but it will take place if the patient do not succumb. The danger in severe cases is generally not from the amount and persistence of the solidification of lung, but from the failure of the vital powers before the resolution is accomplished. Pure pneumonia is as much a self-limited affection as the essential fevers; divested of complications and accidents, it runs a definite career, and ends in restoration, if life be sufficiently prolonged. The exceptions to this statement are the rare instances in which the affection runs into the purulent stage. In the majority of fatal cases, as already stated, death is attributable more to asthenia than to apnoea. These consid-

erations, together with the results of clinical experience, enforce the importance of the supporting treatment in pneumonia.

To support the powers of life, is the leading general indication in the second stage of pneumonia. This indication, in urgency, varies much in different cases. In general terms, it is urgent in proportion to the danger from asthenia. It should govern the treatment in those cases distinguished as asthenic, and whenever there are grounds for distrust of the adequateness of the vital powers to carry the patient safely through the disease. It is a serious mistake to defer supporting measures until the symptoms denote imminent danger from failure of the powers of life. If deferred until then, they will probably be too late. The observing and skillful practitioner will foresee and endeavor to forestall a degree of failure attended with imminent danger. The constitution of the patient, his previous health, and his habits, are to be taken into account in judging early of the ability to sustain the disease. Other things being equal, in a warm climate patients are less able to sustain it than in cold or temperate climates; supporting treatment, therefore, is oftener and earlier called for in the former than in the latter. The plantation negro at the South is less able to sustain it than the white man, and, consequently, is more likely to need support. In the varieties of the disease distinguished as asthenic and typhoid, the reliance for successful management must be on supporting measures. These views are the more to be impressed, because it is undoubtedly true that, until lately, the minds of medical men have been so much occupied with the means of subduing inflammation as to overlook the fact that the means for this end not only often conflict with those which are more important for recovery, but may be positively injurious, and even destructive to life. The attention has been directed too much to the disease, and too little to the patient. We have seen that we cannot expect to subdue the disease; we can only hope, in the first stage, to moderate its intensity. But not a little can be done, by judicious management, towards aiding the powers of life to carry the patient safely through the disease.

The supporting treatment embraces tonic remedies, alcoholic stimulants, and nutritious diet. Of tonic remedies, quinia is to be preferred. It is not indicated in mild cases; but, whenever there are grounds for anticipating undue depression of the powers of life, it may be given, and continued during the progress of the disease. The propriety of giving this remedy, in tonic doses, in a malarious region, as well as to patients who have had periodical fever, has been already mentioned in considering the treatment of the first stage. Under these circumstances, the continuance of the remedy during the second stage is not less appropriate.

Alcoholic stimulants form a very important part of the supporting treatment in this disease, as in all others, whenever the great object is to keep the patient alive until the disease has reached the end of its career and advanced into the stage of resolution. The principle is the same as in the essential fevers. And here, as in the management of the essential fevers, alcoholic stimulants are indicated to an extent commensurate with the danger from failure of the vital powers. In

pneumonia, as in typhus or typhoid fever, there is often a remarkable tolerance of alcohol; and the only guide, as regards quantity, is the effect as manifested by the symptoms. No abstract rules can be laid down, applicable to all cases; but careful observation must furnish the rule proper to each individual case. Here, too, as in the continued fevers, because alcoholic stimulants are vastly important in some cases, it is not to be inferred that they are invariably indicated, nor that they can never do harm; on the contrary, if pushed to an injudicious extreme, they are as potent for evil as they are potent for good when judiciously used.* The question may be asked, Under what circumstances is their use to be commenced? We may say that they are indicated always so soon as evidence appears of any tendency to failure of the powers of life. And of this, the action of the heart, as represented by the pulse, is the best criterion. Feebleness, great frequency, and a pulse vibratory or thrilling, but compressible, denoting increased activity but diminished power of the ventricular contractions—these are the characters which indicate supporting measures, of which alcoholic stimulants are an essential part. Given at first in small or moderate doses, the effect is to be watched, and the quantity increased in proportion to the urgency of the indication. The habits of the patient, as regards the use of alcoholic drinks, are, of course, to be taken into account. Whenever the question arises, in the management of a case, whether alcoholic stimulants are advisable, or not, it should be borne in mind that to begin earlier than they are required is far preferable to subsequent delay; for, with proper care, they can be suspended without any injury having been done; but the time lost, by beginning too late, cannot be regained.

Alimentation is an essential part of the supporting treatment. It is not less important to *feed* pneumonias than to “feed fevers,” or other diseases, whenever there is danger from failure of the vital powers. If this be considered as a bold assertion, it is believed the only reason is its novelty. It is not long since the idea of feeding fevers was equally bold, because equally novel. The statement that patients with pneumonia may safely be encouraged to take nutritious food during the whole course of the disease, is based on considerable experience. And this should enter into the treatment in proportion as the symptoms denote a tendency to asthenia. Animal essences, or soups, milk, and farinaceous substances, should be combined to form the diet, thus securing a proper variety of alimentary principles. The desires and taste of the patient may generally be trusted. The juice of fruits may be allowed.

It may be considered as superfluous to say that, when the supporting treatment is indicated, measures which conflict with this treatment are contra-indicated. But custom has so long sanctioned the abuse of purgatives, that it may not be amiss to caution against their injudicious use in pneumonia. The usefulness of saline remedies of

* In view of a tendency, at the present time, to an excessive use of alcoholic stimulants, the Committee desire to impress the importance of the exercise of proper discrimination and care in their use.

this class, in the first stage, has been alluded to. They are useful as means of depletion without spoliation. After the first stage, purgatives are only indicated when inconvenience arises from accumulation in the bowels; and the mildest measures suffice. Active cathartics depress the vital powers, and, in this way, do harm in proportion as supporting measures are called for.

The use of opium may be considered in connection with the supporting treatment. Opium may be given, as already stated, to relieve acute pain in the first stage. It may be given, also, to allay cough. But, aside from these objects, clinical observation shows this to be a most valuable remedy in the treatment of pneumonia. Given in full doses, in certain cases, it tranquillizes the system in a remarkable manner. The frequency of the pulse and respirations is sometimes notably diminished. Refreshing sleep is obtained. It appears to render the system tolerant of the local affection, if, indeed, it does not, in some instances, induce a more speedy commencement of resolution than would otherwise have occurred. These statements are based on the employment of this remedy in a large number of recorded cases.* An objection to the use of opium, on the score of interference with expectoration, is already disposed of. Expectoration is of no importance with reference to the resolution of pneumonia. That opium does not retard the absorption of the exudation, is shown by the rapid disappearance of solidification in cases in which the remedy has been freely given. The cases to which opium is specially applicable are those in which the affection excites unusual disturbance of the system, manifested by restlessness, vigilance, typhoid delirium, an irritable pulse, etc. Apprehension of inducing cerebral trouble need not be felt, even when typhoid delirium be present; on the contrary, the good effect of the remedy is often manifested by a more rational condition.†

Pericarditis complicating pneumonia adds greatly to the gravity and danger. By perseverance in the judicious employment of supporting measures, we may hope to save lives which would otherwise have been lost. The writer of this paper has reported a case of pneumonia affecting the whole of the right lung, complicated with pericarditis, and eventuating in pulmonary abscess, in which recovery took place under vigorous and long-continued supporting treatment.‡ It may be added, that timely and efficient support probably affords the best security against suppuration, whether in the form of abscess or purulent infiltration, and also against the occurrence of gangrene, which, happily, is extremely rare.

Pneumonia occurring as a complication of the continued or eruptive fevers, calls for soothing and supporting measures. Depressing

* See Analysis of Cases, in *Am. Journ. of Med. Sciences*, No. for Jan., 1861.

† More or less delirium is not very infrequent, even in cases of pneumonia which do not present other symptoms denoting the typhoid condition, and is not in itself necessarily a symptom of grave import.

‡ *New Orleans Medical Reporter and Hospital Gazette*, Vol. for 1860.

measures, such as blood-letting, antimonial preparations, and purgatives, are very rarely, if ever, admissible under these circumstances.

A few words respecting the management of convalescence: There is little or no tendency to relapse. It must be extremely rare for a patient convalescing to be prostrated by a second attack. There is no need, therefore, of extreme precautions on this score. Experience shows that a solid, substantial diet may be entered upon so soon as the patient is fairly on the road to recovery, and that the convalescence is more rapid than if the appetite be too much restrained. As a rule, ordinary wholesome, digestible articles of food may be allowed, when they are craved by the patient. Permitting the patient to begin to sit up when he feels a desire to do so, will be found not to retard recovery, but, on the other hand, apparently to hasten the progress of resolution.

Finally, with regard to pneumonia, as well as other diseases which may endanger life, let it be borne in mind that, although it is the most important end of medical practice to prevent a fatal termination, this does not comprehend the whole aim of the physician even in cases which recover. If he cannot cut short or abridge the duration of a disease, the next best result is to conduct it to a favorable issue. But this is not all. A rapid convalescence and a complete restoration to health are other important objects. And, in seeking to determine the relative merits of different methods of treating a disease, we are not to be guided solely by a comparison of the ratio of mortality, but by comparing the condition of patients during convalescence and after recovery. As regards the disease under consideration, although the substitution of a soothing and supporting treatment for the active measures formerly in vogue has doubtless diminished the rate of mortality, yet the improvement is equally shown in the rapidity and completeness with which health is regained.

In concluding this Report, the following propositions are submitted, embodying the practical views which have been presented respecting the management of pneumonia:

1. Uncomplicated pneumonia, limited to one lobe, in general, does not claim active treatment of any kind—simple palliative remedies and hygienic measures being alone required.

2. Blood-letting and other antiphlogistic measures, with a view of subduing the inflammation, are not warranted by a sufficient probability of success, and, if resorted to for this purpose, will be likely in many cases to do harm.

3. Blood-letting is useful, not by a direct effect on the local affection, but indirectly by diminishing the intensity of the symptomatic febrile movement. It is admissible only in cases characterized by intensity of the febrile movement, when the affection is said to be sthenic, and only in the first stage of the affection.

4. In the cases to which blood-letting, if employed at all, should be restricted, the good effects may generally be obtained by saline purgatives, together with sedative remedies, such as the preparations of antimony and the *veratrum viride*.

5. The remedies just named are indicated only in the cases referred

to. Given in cases indiscriminately, and carried to an injudicious extent, they may do much harm. They should be used with great circumspection, and rarely after the first stage of the disease. It is never advisable to push them so far as to occasion distressing nausea or vomiting, and to enfeeble the heart's action.

6. Acute pain, depending on coexisting pleurisy, does not call for general blood-letting. Dry or wet cupping, fomentations, and stimulating applications to the chest are useful, and, if not effectual, opium may be given sufficiently to relieve this symptom. The oiled muslin jacket, to be worn during the disease, is to be recommended.

7. The combination of intermitting fever and pneumonia calls for the prompt use of quinia in sufficient doses to arrest as speedily as possible the paroxysmal affection. Small or moderate doses of this remedy should be given in malarious regions, and to patients who are subject to intermitting fever, in order to prevent the development of intermitting fever, and to obviate the unfavorable influence of the malarious cachexia. The remedy should be continued during the progress of the disease.

8. Antimonial preparations, mercury, blisters, and expectorants are not called for with a view to promote resolution of the pulmonary affection. There are not sufficient grounds for the belief that they hasten the removal of the exudation, and, if not useful, they must be injurious. There are no remedies to be employed specially for this object.

9. In severe cases of pneumonia, after the disease has advanced to the second stage, the most important object of treatment generally is to support the powers of life, to obviate the tendency to death by asthenia, and to carry the patient safely through the disease.

10. The supporting treatment consists of tonic remedies, alcoholic stimulants, and nutritious food. These are to be combined, in order to render the supporting treatment efficient.

11. Alcoholic stimulants may be given without fear of affecting unfavorably the local affection. They should be given so soon, at least, as the heart's action and other symptoms afford evidence of any failure of the vital powers. They are to be given more or less freely, according to the danger from asthenia, the degree of tolerance, and the apparent effect. They are not to be given as a matter of course, but only when indicated; and the quantity given is to be determined by the exercise of care and judgment.

12. A supporting diet embraces the animal essences, milk, and farinaceous articles. There is no risk in encouraging the patient to take nutritious food at any time during the progress of the disease; and there is reason to believe that danger from exhaustion may be forestalled by alimentation, together with the early employment of tonic remedies and alcoholic stimulants.

13. Purgatives, after the first stage, are not indicated, save when there is inconvenience from fecal accumulation, and then the mildest remedies which will effect the object are to be preferred.

14. Opium, given, not to relieve pain or allay cough, but to tranquillize, promote sleep, and render the system more tolerant of the

local affection, is a valuable remedy in pneumonia. It is indicated by unusual disturbance of the circulation and nervous system, and its good effect is shown by a marked improvement in all the symptoms. This remedy does not retard the resolution of the local affection. It conduces frequently to improvement as regards delirium.

15. Soothing and supporting measures are especially called for in cases of pneumonia distinguished as asthenic and typhoid, and when pneumonia occurs as a complication of the eruptive and continued fevers.

16. The occurrence of pericarditis as a complication is an additional reason for the supporting treatment.

17. In convalescence from pneumonia, there is not much, if any, danger of relapse, and the recovery is more rapid if a substantial diet be allowed, and the patient permitted early to sit up.

The Italian Campaign of 1859. Medico-Chirurgical Letters from General Head-Quarters. By Dr. A. BERTHERAND, Principal Medical Officer of the First Class, etc., etc. Translated for the AMERICAN MEDICAL MONTHLY.

LETTER I.

Departure from Algeria—The Passage—The “Bretagne”—Genoa—Its Hospitals—Its University—Its Anatomical Museum.

TO PROFESSOR PÉCHOLIER:

My Dear Colleague—At the time of my departure, on the 7th of May last, you made me promise, together with several of our colleagues in the Medical School of Algeria, to send you occasional tidings of myself, or rather—let me drop my own individual insignificance in view of the great events of the day—*tidings* of the *Army of Italy*.

I enter upon this engagement the more willingly, as it furnishes me an opportunity of indicating the value which I attach to the sympathies sprung from our common efforts to put into operation a useful project. I feel an earnest desire to continue those relations, interrupted, indeed, for a time, by an imperative duty, but kept fully alive by the hope of one day re-establishing them more firmly than ever. If, in writing to you, I borrow the columns of the *Gazette Médicale of Algeria*, do not attribute to me the ambitious design of wishing to make public notes hastily stolen during the brief halts of the march. I do but yield to the necessity of testifying, by the souvenir, my gratitude to my old readers, and to our worthy colleague, Dr. E. Kolb, who is so good as to assume in my absence the irksome duty of Editor *ad interim*.

For a passenger in the "Bretagne," fifty hours only separate Genoa from Algeria, provided that, as on the days of the 8th and 9th of May last, neither wind nor wave oppose the powerful screw, which relentlessly drives the giant of the French marine before its unwearying paddles. The courteous hospitality with which Vice-Admiral Romain-Defossés does the honors of his table and his saloons, would still further shorten the distance, were it not for the one idea of disembarkation, which from the poop to the lowest battery, holds the entire vessel under the control of the most impatient excitement.

At last, early on the morning of the 10th, our glasses are directed over the starboard, towards the mountains of Corsica, whose pointed summits are clad in robes of condensed fog. Soon the Apennines rise upon our right, and here that cherished coast of the invalid tourist, Nice, Villafranca, Monaco, the Corniche road, and—we are in the Gulf! Before us, like the back of the stage, when the scenes are shifting, the City of the Doges seems to rise majestically from the bosom of the waves. On the horizon, white sails, among which the long black lines of smoke drift back from the steamers, speed their way to Genoa, Spezzia, Leghorn, Marseilles and Algeria.

But this animation on the sea is nothing in comparison with that which awaits us on the shore!

There, for two weeks past, twenty steamers have every day vomited forth soldiers, horses, mules, caissons, cannon, and projectiles of every kind. From Acqua-Verde to Rivarole, and the smiling vale of Polcevera on the west, and as far as the Exchange, the Porto del Arco, and the Ravine of the Bisagno, on the other side of the port, the camp unfolds itself across the patrician city, with its motley uniforms, and its din of drums and bugles. Along its whole length, applause, shouts, hurrahs, drown the deep voice of war.

'Tis the welcome of Italy, proclaiming the glory of France, who brings her liberty!

Genoa has opened to her avenging guests her most sumptuous palaces. The Commissary and the Commandant occupy the historic dwelling of Andrea Doria. Our general head-quarters await the Emperor at the Palais Royal, between the University and the Arsenal. The Provost Marshal is quartered in the Palais Balbi, not far from the Church of the Annunciata, with its naves glittering in gold and marbles. The immense hotels ranged along the *quai* of the old port, behind the Portici, overflow with officers.

At the time that we set foot upon the land, the sanitary department of the hospitals and ambulances, roughly sketched out by the

brief and hurried directions of the Minister of War, had scarcely begun to be formed. They were still awaiting from France a large amount of material and a corps of employees proportionate to the medical necessities of an aggregation of more than a hundred and twenty thousand men. Not to mention the noble mutilations of the field of honor, numerically dependent upon the number, the importance and the fortune of engagements, humanity bids us to provide also for the more obscure, but not less truly self-devoted, victims of fever, dysentery, typhus, and scurvy; those sad epidemics inevitably associated with the placing of an army in the field. Taking, then, the proportion of one-sixteenth of the entire force as the probable average of those disabled by disease, at any given moment, we have a total of eight thousand, for whom hospital accommodations must be arranged. While, until the arrival at Genoa of the honorable Dr. Baron Larrey, Inspector-in-Chief of the Medical Department, our colleague, M. Boudin, is occupied in seeking for positions adapted to this organization, the patients who present themselves day by day are received into the civil and military hospitals of the city. Charged with the duty of visiting these establishments daily, I take from my notes a few records of such a nature as to give you an idea of their arrangement and condition.

If the ancient rulers of the Mediterranean, in order to shelter their riches and preserve their power, erected monuments of Babylonish magnificence, which, even at the present day, constitute the pride of their disinherited successors, prosperity with them, let us bear in mind, did not forget the tithe due to misfortune and suffering.

Placed in the centre of the city, between the delightful promenade of Acqua Sola and the Post-Office Square, the civil hospital might certainly be added to the proud list of the *twelve palaces* of the *Via Nuova*. Four grand structures, inclosing a square court, and surrounded by arched corridors, properly constitute this fine edifice. It is capable of receiving eight hundred patients. You enter by a large vestibule, on which open the guard-rooms and offices; opposite, a marble staircase leads to the first story, under a species of portico, adorned by a colossal statue of the original founder of the institution.

On the right and left of the court are the medical and surgical clinics. Above the ground floor, the halls corresponding to the four sides of this rectangle, communicate freely with one another, thus forming one single immense dormitory. The pharmacy, the lying-in department, and the anatomical theatre, are attached as dependencies

to this magnificent Nosocomie, whose vast proportions render it a veritable monument of Genoese benevolence.

We should have nothing but praise for the plan of its construction, were not the advantages of its lofty wards, here, as at Alexandria, Verceil, and Novara, neutralized by the fatal custom of ranging the patients on four rows of beds. This disposition of them shocks too deeply our ideas of hygiene, to have left me to be the only one to point out its dangers to MM. Ramorino, Bignone, father and son, Botto, and other Italian confrères, whose names I have lost, without having forgotten their cordial affability.

There were not more than seventy-nine French patients at Pammatone at the time of my departure, the majority of them being affected with angina, acute rheumatism of a very intense grade, diarrhœa, bronchitis, and in a few instances, pneumonia. Arthritic and pulmonary affections are, it appears, very common in Genoa, nor on that account less violent. The native physicians treat them exclusively by repeated general bleedings and a profusion of leeches; as though to prove once more that "*no man is a prophet in his own country*," the contra-stimulant mode of treatment is almost completely out of use here. Do the atmospheric conditions which the city owes to its topographical situation between the sea and the maritime Alps, confer upon local disorders an inflammatory character of sufficient intensity to justify such a use, I had almost said abuse, of depletion?

Manicome, the Hospital for Chronic Diseases, and the Division Military Hospital, also attract the attention of the physician in Genoa.

The little that I was able to see of the first, only authorizes me to speak of it as attesting the style of luxury and comfort in which it is furnished. In the second, five hundred invalids find an asylum. It is still, like Pammatone, richly endowed, in spite of the sad breaches which the vicissitudes of war and revolution have made in its ample revenues.

I regret that I am unable to pen a similar eulogium on the situation and general appearance of the Military Hospital of Sardinia, intrusted to the enlightened medical direction of the Division Surgeon M. Nicolis and Professor Rossi. This establishment has been located in an old convent, shut in at the foot of the rocky hill which bounds the port of Genoa on the west, and in no respect meeting the exigencies of the object to which it is assigned. Destitute of ventilation, damp from situation, and perhaps, too, from want of proper care, its wards and corridors offend the nose as much as they do the

eye. Out of two hundred and thirty-five French soldiers whom I found here on the 16th of May, one-third had been lodged in a granary, temporarily transformed into an appendage to the hospital, and were hence subjected to much discomfort.

The first care of the French authorities, on arriving at Genoa, was to possess themselves of the fine barracks of San-Benigno, which command the new mole. Of these two large buildings, the *lower Quarter* was at once set apart as a hospital, under the direction of the principal medical officer, M. Maupin, assisted by some fifteen Sardinian physicians or surgeons, for whom requisition was made by the Commissary. But up to the present time, the French Medical Board exerts its salutary influence at San-Benigno only. Such a condition of things will, without doubt, be merely temporary, and will cease upon the arrival of the military surgeons now imperatively demanded in France. Without doubting the least in the world the zeal, the science, and the humanity of our colleagues in Genoa, and even while paying a just tribute of gratitude to their good intentions and their assiduity, it remains none the less a fact, that a staff thus constituted will work but very imperfectly at best. Suffering has its instincts, its caprices, its prejudices, which ought to be respected. Confidence on the part of the patient in the physician appointed to take care of him, is inspired by fellowship of country, and community of habits and language. Never, in spite of political alliances, will the attentions of a foreigner rise to the height of that brotherly love inspired by a national fellow-feeling, which alone can effectually supply the place of the absent family.

I will not leave Genoa without taking you, by the aid of a reflection of the impression which these places have left upon my mind, to the Academy, and the Museums of Natural History and Anatomy. The Academy, where science too dwells in a *palace*, contains fine specimens in the different departments of natural history. Mineralogy, especially, feels the benefits of this Alpine neighborhood, without which, all the gold of the Doges could not have made Genoa anything but an ordinary city, barren of colonnades and porticoes.

The anatomical theatre possesses a fine collection of urinary calculi. I noticed here, among other curious specimens, a second cervical vertebra, in the body of which was buried a steel blade, the result of a stab with a stiletto, falling behind the nucha, and passing quite beneath the occipital bone. The *Portinajo* will not fail to stop you before that feminine stone, the nucleus of which is a hair-pin which had strayed to some little distance from its official position. If I had but

the time, I would lead you from *Acqua Sola*, by way of San Lorenzo and San Georgio, across old Genoa to the Exchange and Portici.

But, they have had a fight—read! They have beaten the Austrians at Casteggio and Montebello. The wounded are already arriving at Alexandria; the electric telegraph calls for the ambulance of the Head-Quarters: in two hours we shall be at our post. I must leave you, my dear colleague, in haste, and with no rhetorical precaution. All is fair in war!

Another day I propose to continue this chat, if it will interest you—and if our friends, the Austrians, permit it!

Fortunately, the Zouaves are there before me. For a short time, then, yours from the heart. 

GENOA, May 21st, 1859.

REVIEWS AND BIBLIOGRAPHY.

Border Lines of Knowledge in some Provinces of Medical Science. An Introductory Lecture, delivered before the Medical Class of Harvard University, November 6th, 1861. By OLIVER WENDELL HOLMES, M.D., Parkman Professor of Anatomy and Physiology. Boston: Ticknor & Fields. 1862.

Whenever Dr. Holmes serves up a dish, we feel that we are going to have something that will relish. No matter how trifling the delicacy, it comes to us well seasoned. The palate is tickled, deglutition becomes easy, and digestion goes on most comfortably and satisfactorily. There is nothing underdone about it on the one hand, nor on the other is its juice extracted by long maceration in the tepid water of many words. Whatever of nutritious material it contains—and it is not generally by any means destitute of the nitrogenous elements—is entirely capable of assimilation. In other words, he knows what he is talking about, and how to talk about it—two requisites as rare as they are important. To these qualities he adds a most happy aptitude for the perception of analogies, which always make a style attractive, although we cannot but think that in some cases he suffers it slightly to warp his judgment. The little essay before us, designed to show how far the different branches of our science have progressed on the road to perfect knowledge, and where they have met with barriers thus far insurmountable, is no exception to the rule of these

remarks. How apt and terse, for instance, is this opening idea, which follows an appropriate tribute to those who have filled the place of Demonstrator under him—Parkman, Kneeland, and Hodges: "Science is the topography of ignorance. From a few elevated points we triangulate vast spaces, inclosing infinite unknown details; we cast the lead, and draw up a little sand from abysses we shall never reach with our dredges. The best part of our knowledge is that which teaches us when knowledge leaves off and ignorance begins." And again: "Do not expect too much ground to be covered in this rapid survey. Our task is only that of sending out a few pickets under the starry flag of science, to the edge of that dark domain, where the ensigns of the obstinate, rebel ignorance, are flying undisputed. We are not making a reconnoissance in full force, still less advancing with the main column. But here are a few roads along which we have to march together, and we wish to see clearly how far our lines extend, and where the enemy's outposts begin."

In chemistry, the Professor says we have learned very much as to the '*how*,' but very little, if anything, as to the '*why*.'

The facts of *allotropism*—of *catalysis*, which he fancifully declares causes a substance to "play the part of the unwedded priest, who marries a pair, without taking a fee or having any further relation with the parties,"—and of *Isomerism*, are stubborn facts, which are as yet entirely outside of the pale of our general laws. "The problem of force meets us everywhere, and I prefer to encounter it in the world of physical phenomena, before reaching that of living actions. It is only the name for the incomprehensible cause of certain changes known to our consciousness, and assumed to be outside of it. For me it is the Deity himself in action." This we presume to be nothing more than the teaching of orthodox theology, that the "laws of nature" being the exercise of the power of the Supreme Ruler, that power must be constantly exercised, in order that these laws may be perpetually sustained.

Descriptive Anatomy was pretty much finished by Vesalius and Albinus; our gain has been in the anatomy of the tissues and in regional anatomy; and when we add to these microscopic anatomy, we have gone far towards making the science a perfect one.

In Pathological Anatomy and Physiology, too, the microscope is making great advances for us. In the discovery of the cell organization "we have discovered the working bee in this great hive of organization. We have detected the cell in the very act of forming itself

from a nucleus; of transforming itself into various tissues; of selecting the elements of various secretions. But why one cell becomes nerve and another muscle, why one selects bile and another fat, we can no more pretend to tell, than why one grape sucks out of the soil the generous juice which princes hoard in their cellars, and another the wine which it takes three men to drink—one to pour it down, another to swallow it, and a third to hold him while it is going down." Here, again, we have reached the border line. To say, as Freke does, that *organic affinity* is the ruling principle, is simply to use a word to describe our ignorance.

The author considers that the question as to the acid of the gastric juice is settled in favor of the lactic. The existence of *protein* is doubtful; nor can the theory that nitrogenous food alone is *plastic*, and non-nitrogenous only *calorifacient*, be sustained.

In speaking of the minute anatomy of the nervous centres, he alludes in terms of high commendation to the exquisite microscopic photographs of Dr. Dean, (a recent graduate of the Harvard school,) from sections of the medulla oblongata, which appear to him to "promise a new development, if not a new epoch, in anatomical art."

"In the brain we are sure that we do not know how to localize functions," and hence it follows that phrenology is "left, *sub Jove*, out in the cold." "It does not stand at the boundary of our ignorance, it seems to me, but is one of the will-o'-the-wisps of its undisputed central domain of bog and quicksand." After referring to some of the points recently made out in regard to the physiology of vision, the author concludes this part of his subject, and proceeds to consider the principles which should guide us in our treatment of the sum of vital unities constituting the frame of man, when assailed by disease. And here, it is that we are inclined to think that his fondness for analogies has led him a little astray.

Because we restore scrubby trees to a state of health, by digging around and dunging them, rather than by administering purgative doses of calomel and jalap, he concludes that the same course is the true one to be pursued towards the human being. We felt inclined, after hastily running over his argument, to reply to him as the child did to its fond parent who wished to reconcile it to early hours of retirement, by citing the example of the sheep: "But, pa," said the little logician, "I'm not a sheep!" So would we say: "But, dear doctor, our patients are not trees." But a more careful perusal shows us that he acknowledges the fact, that if a man be a plant at all, "he is, at least, a very curious one; carrying his soil in his stomach, which is a kind

of portable flower-pot, which he grows around instead of out of." We consider that the analogy fails in the first place, because of the totally different conditions of existence of the plant and the animal; and secondly and principally, because we know of no diseases in the plant *but* those of nutrition. Acute inflammation, or indeed acute disease of any kind, is a process not to be conceived of in a plant, and occurring in a human being, springs up entirely independently of any vice of nutrition. How, then, is that which is in no way dependent for its existence upon nutrition or mal-nutrition to be remedied by a modification of nutrition? The author admits that even in the case of vegetables, an element which is not a material constituent of the vegetable structure, "may be employed for the purpose of killing parasites." Now it is still a question with those who have paid the most careful attention to the subject, whether many of the diseases to which the human body is incident may not be due to the presence of animal parasites or minute fungi in the circulating fluid. And if such poisons exist in the blood, why may not their antidotes be discovered, as well as for those palpable and known poisons which are purposely introduced through the medium of the stomach? And when Nature is attempting to relieve herself of a morbid influence, why is it a strange thing to suppose that some substance foreign to the human body, and in no way capable of aiding its nutrition, may be able to assist in the process, by virtue of its peculiar action on the eliminating organs? It is all very well for the professor to say that "he trusts that the youngest student on these benches will not commit the childish error of confounding a *presumption against* a particular class of cases with a *condemnation* of them," but if the argument from analogy thus suggested be strictly followed, it strikes at the root of our whole system of therapeutics. He has such an irresistibly comic way of putting things, however, that one cannot long feel out of humor with him. For example, he tells us that "copper, antimony, and other non-alimentary simple substances are, every one of them, intruders in the living system, as much as a constable would be quartered in our household. This does not mean that they may not, any of them, be called in for a special need, as we send for the constable when we have good reason to think we have a thief under our roof; but a man's body is his castle, as well as his house, and the presumption is, that we are to keep our alimentary doors bolted against these perturbing agents."

Were this idea merely a fanciful analogy introduced for the sake of illustration, it would not require more than an allusion. But we re-

gard it as an index of the tendency which the writer's mind has exhibited, now these many years, toward a condition of universal incredulity. There is danger that the same error which has crept into his theology will taint his medicine. Failing to recognize the soul of man as radically diseased, he fails to see the necessity for the remedies of the Great Physician; and in like manner regarding the body of man as absolutely healthy, he cannot appreciate the necessity for anything more than the favorable hygienic conditions to counteract its little deviations from the normal standard.

While we fully agree with him, that the "instincts of the sick" should be more carefully studied, and less persistently thwarted, and that very much may be accomplished by proper attention to the diet, we firmly believe that many of these *alien elements* have for their especial and only object the restoration of the diseased frame to health.

In speaking of the cyclical changes in medical doctrine, which he thinks not at all due to any change in the constitution of disease, (and here too we must differ from him to some degree,) he points out the cheering fact, that each return to the opinions of former days brings us somewhat in advance of them. A theological professor of this city is accustomed to describe the progress of the world as being in the direction of a spiral, continually returning to the same latitude which it occupied decades ago, but on each return occupying a more advanced position than it did when there before. So it is with medical science. There is real progress, though at times with apparent retrogression.

We would advise every physician to read this little essay. We can promise our brethren an hour's enjoyment while so occupied, and can assure them that it will set them to thinking, which cannot be said of many a more pretentious volume which appears from the modern press.



EDITORIAL AND MISCELLANEOUS.

—THE COMMENCEMENTS.—A stranger dropping in at the meetings of the Academy of Medicine or the Pathological Society during the past month, would have wondered at the slimness of the attendance, as compared with that of a month before. It is to be accounted for by the fact that the examinations were just then coming on at all the colleges, and, as perhaps the largest proportion of the attendance at

our Societies consists of students, their absence creates a noticeable vacuum. Besides, their absence necessarily induces that of examining professors and of cramming quizzers, who also are of the class who devote themselves most diligently to the interests of the science, as represented in our medical societies. This brief agony, however, is now over. Those students who, by a proper use of the ample advantages which the schools of our city afford them, or by an improper use of the facilities afforded by a wholesale "quiz," have passed their "great go," know it, and have already, in the presence of admiring crowds and their best broadcloth coats, received the magic *pergament* which confers upon the much-coveted title. While those who have "flunked" also know it, and have retired to the shades of private life, either with the determination of otherwise devoting their misapplied energies, or of bravely going to work again, and conquering the obstacles, which this time proved too much for them.

Notwithstanding the unfavorable prognostication for a harvest, which the unsettled state of the country gave in the commencement of the session, the educational mills seem to have ground quite a fair grist.

The first to show its results, taking them in the chronological order, was the NEW YORK MEDICAL COLLEGE AND CHARITY HOSPITAL. The Commencement was held in the College Building, on Tuesday evening, March 4th. The degrees were conferred by the Rev. J. M. Mathews, D.D. Prof. Percy delivered the Valedictory Address to a graduating class of eleven.

The UNIVERSITY followed on Thursday, the 6th, Chancellor Ferris conferring the degree of M.D. upon a class of sixty-five. The Valedictory Address was delivered by Prof. Van Buren. The following prizes were awarded:

Dr. Mott's silver medal, to W. H. Bates, New York; Dr. Mott's bronze medal, to W. H. Mather, Connecticut; Dr. Van Buren's first prize, to Eugene S. Alcott, New York; Dr. Van Buren's second prize, to W. H. Bates, New York; Dr. Metcalfe's first prize, to J. H. Mills, New York; Dr. Metcalfe's second prize, to A. S. Laubach, Pennsylvania.

Third in order came the BELLEVUE HOSPITAL MEDICAL COLLEGE, New York's youngest-born; but a right sturdy bantling did it prove itself. Its first Commencement took place at Irving Hall, on Monday evening, the 10th inst.

The President of the Faculty, Dr. Isaac E. Taylor, read the list of

graduates, amounting to twenty-eight, and made a few appropriate remarks in presenting the diplomas.

Prof. George T. Elliot followed in a Valedictory of unusual eloquence and pathos. We make the following pertinent extracts:

"In the suburbs of our city, on the margin of a broad river whitened by the sails of a sleepless commerce, there may be seen the noblest range of buildings in the State, where a thousand windows sparkle in the cheering rays of the sun, as they stream into wards devoted to the solace of every human woe—'Where hopeless Anguish pours his groan, and lonely Want retires to die.'

"You know those places well. There, in the shadow of those vast Hospitals, have you been armed for your struggle with disease. In these wards, by those bedsides, have you seen the patient application of the searching analytical laws by which we seek to discover the essentiality of disease. There you have seen the physician's triumph in success from the joy of convalescence; there you have seen his comfort after failure in the absolute proof of a correct diagnosis, and the employment of the best resources at his command. 'By medicine life may be prolonged, yet Death will seize the doctor too.'"

The opportunities enjoyed by the physician for obtaining an insight into human nature, in all its phases, conditions, and gradations, were thus happily alluded to:

"But how sublime, how touching a spectacle is that of humanity in all its gradations, from the throne to the hovel, swaying together, and reaching a common level before the same emotions! In the spacious halls of Windsor Castle, guarded by the best sanitary precautions of the age, the Prince Consort of England, in the prime of life, succumbed to that fever which it is the pride of sanitary science to avert; while but a moment later the throng of miners in Hartley Colliery perished from one of those accidents which no engineering skill can positively prevent, and a village became desolate. Struggling through cold courtly conventionalities, the widowed Queen calls aloud to the widowed peasant, and their voices mingle in the diapason of a common lamentation. From the chamber of death, through the house of mourning, the physician daily passes to the contemplation of the purest joys which bless the pilgrimage of men. He sees the humble home illumined by the smile of a contented spirit, and finds envy enthroned amid luxurious decorations. The extremes of the social scale meet him in the same spirit. He listens to the simple recitals of magnanimous self-denial, and to the fretful whims of pampered self-indulgence. No Asmodeus ever saw society so truly as it

is. No other profession ever brings man so unreservedly in contact with his fellow-man at every step of life from the cradle to the grave. These influences form the character of the true physician, and make him tolerant, liberal, forgiving, humble. To him, more than to any other man, belongs the blessed privilege of explaining faults of character, not only by faults of education, but by the influences of disease so often lurking in the attributes of health. Like Ithuriel, he touches with his spear the evil spirit poisoning the brain, and Reason once more resumes her sway over the troubled mind. From the study of these influences, and from the daily recognition of their effects in the sins of omission and commission, the physician sees further than others can possibly be expected to see into the grand mystery which surrounds the reconciliation of Infinite Justice with Infinite Mercy."

The audience were then addressed by Mr. Simeon Draper, President of the Board of Commissioners of Charities and Correction, who briefly acknowledged the services which the physicians of New York had rendered to her free asylums for the poor and unfortunate. The Class-Valedictory was delivered by Mr. Van Buren Hubbard. The final address, by the Rev. Dr. Chapin, who "appeared," as he said, "by the advice of eminent physicians," was in that gentleman's usual eloquent and pointed style.

The following resolutions, handed to us by members of the class, appear appropriately in this connection.

At a meeting of the students of *Bellevue Hospital Medical College*, the following resolutions were unanimously adopted:

Whereas, During the present Session of 1861-2, the Faculty of the *Bellevue Hospital Medical College* have been unceasing in their labors and endeavors to place within our reach every possible means and privilege for the interest and benefit of the class attending; and in view of the foregoing facts, deeming it just and proper that we should give public expression to the feeling of perfect satisfaction which the course of instruction received during the past term has given to every member of this class: Therefore,

Resolved, That as an expression of our appreciation of the unremitting interest they have manifested in all departments of instruction, and as a slight return for the many benefits we have received, we hereby tender to the *Faculty* of the *Bellevue Hospital Medical College* our sincere and heartfelt thanks.

Resolved, That the Commissioners of Public Charities and Correction, by giving students of medicine access to the public institutions under their charge, thus granting them extraordinary facilities for the practical study of disease in all its forms, have conferred a great benefit upon the medical profession, and consequently upon the community at large.

Resolved, That it is our unanimous conviction, founded upon the past winter's experience, that the *Bellevue Hospital Medical College*, from its thorough combination of didactic with clinical teaching, and from its intimate connection with the most extensive hospitals on this continent, offers advantages and facilities for the acquisition of a thorough practical education heretofore unknown in this country.

Resolved, That Messrs. Peck, Dwight, and Daniels be appointed a committee to present a copy of these resolutions to the Faculty of Bellevue Hospital Medical College, also to the Commissioners of Public Charities and Correction, and secure the publication of the same in the *American Medical Times* and New York MEDICAL MONTHLY.

A. G. AVERY, M.D., *Chairman*.

E. B. MILLER, M.D., *Secretary*.

The Medical Department of Columbia College, more familiarly known as the College of Physicians and Surgeons, which, by-the-way, we have always considered as rather a misnomer for an educational institution, closed the Commencement season on Thursday evening, March 13th. The exercises were held at Dr. Parker's Church, corner of Fourth Avenue and Twenty-second Street.

The venerable Dr. Delafield presented the diplomas, and made a brief but effective address. The Valedictory was delivered by Dr. Field, a member of the class.

The number of graduates was sixty-eight, including those who came up for graduation at the autumnal examination.

At the conclusion of the Commencement exercises, the Annual Oration before the Alumni Association was delivered by D. Tilden Brown, M.D.

The entire number of graduates at the four colleges was therefore one hundred and seventy-two, indicating by no means so great a falling off as the present troubles had led us to anticipate, or as the Philadelphia institutions have suffered.

— At the meeting of the Academy of Medicine, held Wednesday evening, March 19th, Prof. Barker's Propositions on the Use of Chloroform in Obstetrics came up for decision, according to the notice given at the last meeting.

On motion of Dr. Griscom, however, the whole matter was tabled. The ground which the doctor took in offering the motion, viz., that the Academy of Medicine is not competent to decide upon purely scientific matters, and that such decision does not come within the scope of its powers, we consider at least debatable, if not utterly unsound. We may take occasion at some future time to give our reasons for so thinking. We were somewhat surprised that no Fellow attempted to dispute the point.

Dr. Stevens offered the following resolutions, justly eulogistic of those members of our profession now serving their country on the battle-field. They passed amid much enthusiasm, and were ordered to be transmitted to the medical journals throughout the country:

Whereas, During the present unhappy war many of our professional brethren in service among the combatants have risked their lives, or gone into voluntary captivity, rather than desert their sick and wounded, and have exercised their skill alike on friend and foe: Therefore,

Be it Resolved, That in such conduct this Academy recognizes the true spirit which should ever animate the ministers of humanity; and in testimony whereof,

It further Resolves, To welcome to its sittings those who have acted under these self-sacrificing and generous impulses.

— It will be noticed by reference to our advertising pages, that in consequence of the absence of Prof. Doremus, who has just sailed for Europe, and of Prof. Dalton, who is serving his country in a professional capacity, the Chairs occupied by those gentlemen in the Long Island College Hospital will be filled respectively by Prof. Darwin G. Eaton and Prof. Austin Flint, Jr.

-- ERRATUM.—In Dr. Hartmann's paper entitled "Medicine from the Human Body," in our March number, in the seventh line from the bottom of the first page, for "national materia medica," read "rational materia medica."

-- NEW HOSPITALS AT WASHINGTON.—We learn from the *Washington Republican* that the Government is making ample preparations for the accommodation of the sick and wounded soldiers, in the erection of two immense hospitals, under the approval of the Sanitary Commission.

Each hospital will cover about an acre and a half of ground, and is of framework. The description of the one in the Infirmary Square will answer for both. It will contain ten wards, besides a kitchen and administration building, and will be capable of accommodating upward of four hundred patients.

The administration building will be two stories high, eighty feet long and fifty-two feet wide, fronting on E street, and will be connected with the rear building by an immense corridor two hundred and seventy-five feet long; the wards, of which there will be ten—five on each side of the corridor—will be separated from the main building with a yard twenty-seven feet wide between them, to admit of light and free ventilation. Each of the wards will be eighty-four feet long and twenty-eight feet wide, and will be furnished with both gas and water. The surgery-room will be at the north end of the corridor, and will be fitted up with all the conveniences of a well-arranged hos-

pital. The kitchen, laundry, &c., will be on the east of the main or administration building. The whole structure will be three hundred and eighty feet long and two hundred wide. Each of the buildings rests on piles, and will be elevated about three feet from the ground, so as to exclude the dampness.

—THE RELATIVE ADVANTAGES OF THE FRENCH AND ENGLISH HOSPITALS has recently been engaging the attention of the Academy of Medicine of Paris, and of the French medical periodicals. M. Husson, Director of the Board of Public Assistance of Paris, writes as follows to the Academy on this subject. If his statement be true that the hospitals of London contain only 3,700 beds, New York is as much in advance of her as Paris is.

“The hospitals of London only contain 3,700 beds for a population which is double that of Paris. The hospitals of the latter city contain 7,000 beds, without counting the beds of the sick wards in the hospices; we have therefore to provide for greater wants under more difficult circumstances. Most of our hospitals are situated on high grounds or in the midst of plantations free from houses, as is the case with Beaujon, Lariboisière, Saint-Antoine, La Pitié, Cochin, the Enfants-Malades, and Necker. Nothing of the kind exists in London. With the exception of a single hospital situated near Hyde Park, all the hospitals of the city are built in the midst of populous districts, and in narrow streets. They have generally neither gardens nor courts, and the sick wards receive light from one side only, which is a great defect. There are even dissecting-rooms in several of the hospitals. Now these are the establishments which are compared to ours! It is true that the wards of these imperfect hospitals in general contain fewer patients than ours. The English like to leave large open spaces in their wards; but, by an illogical arrangement, they pack the beds closer together. There is no bad smell in the hospitals of London, although there is no artificial ventilation; and this advantage, with few exceptions, we certainly do not enjoy at Paris. But in London they open the windows during the doctor’s visit, and several times a day, which explains the absence of smells. The English beds are much more simply constructed than ours, which are too complicated. There are no curtains to the English beds. The wards are warmed by fire-places, but it is a mistake to believe them sufficient to ventilate the wards, or to suppose that they can replace a well-arranged artificial ventilation. There are no refectories in most of the London hospitals. At Guy’s Hospital the dining-tables are placed in the sick wards. I will not continue this parallel any further, but I beg the Academy to keep in mind, that various improvements, especially as regards the bedding, are in contemplation for the hospitals of Paris.”

—VOLUNTEER SURGICAL AID TO THE WOUNDED passing through our city is about being systematized. The unexpected arrival of from one

to two hundred of the victims of Newbern, and the entire absence of preparation for their wants, elicited the following call, which appeared in the morning papers of Friday, March 28th :

The Surgeons connected with the different hospitals of New York and Brooklyn, and those who have served in those institutions as assistants, as well as other practitioners of Surgery, are invited to attend a meeting at the New York Hospital this day, (Friday,) at 2 $\frac{1}{2}$ o'clock, to adopt measures for affording surgical aid to the wounded soldiers on their arrival and during their stay in the city.

VALENTINE MOTT, M.D.

ALEXANDER H. STEVENS, M.D.

In response, about fifty physicians met in the Governor's Room of the New York Hospital at the time specified. Dr. Valentine Mott was called to the chair, and Dr. H. B. Sands appointed Secretary.

An Executive Committee of eleven, to which were added Drs. Mott and Stevens, was nominated, with power to raise funds to open and furnish a Dispensary and Infirmary in such portion of the Park Barracks as the authorities may place at their disposal, and to call upon physicians who volunteer their services, by handing in their names to the Secretary, to serve in regular rotation, as emergency may require.

— McCLELLAN ON DRUNKENNESS IN THE ARMY.—Higher testimony than this, in stronger terms, could not well be given against this most demoralizing vice. The General in-Chief says, in returning the unsatisfactory finding of a court-martial in which drunkenness was made a palliation for breach of discipline:

“No one evil agent so much obstructs this army in its progress to that condition which will enable it to accomplish all that true soldiers can, as the degrading vice of drunkenness. It is the cause of by far the greater part of the disorders which are examined by courts-martial. It is impossible to estimate the benefits that would accrue to the service from the adoption of a resolution on the part of the officers to set their men an example of total abstinence from intoxicating drinks. It would be worth fifty thousand men to the armies of the United States.”

— Dr. James M'Ghie, Superintendent of the Glasgow Infirmary, as we notice in the *Medical Times and Gazette*, adds another to the list of useful men of whom our profession has recently been deprived by death. He was for many years co-editor of the *Glasgow Medical Journal*, and contributed many of its most valuable papers. Among his efforts in the cause of science was that to introduce “oiled paper” as a substitute for oiled silk, India rubber, &c., in dressings. We find the following description of his method of preparing it in the

Boston Medical and Surgical Journal. It certainly deserves a trial in our hospital practice, at least. The following is the mode of preparation:

Take good "tissue" paper, free from holes, as many sheets as may be required; boiled linseed oil, say one quart; to which add one ounce sulphate of zinc, and reboil for an hour or longer. A little beeswax and turpentine may be added, while the oil is hot. Use a square board, larger than the sheet of paper. Coat the first sheet on *both* sides with a broad paint or paste-brush; the rest of the sheets only require to be coated on one side, as the oil strikes through. Place the second sheet on the top of the first, slightly projecting at one end, for the convenience of lifting, and so on, *seriatim*. When all the sheets are coated, hang them up to dry in a moderately warm place, for twenty-four hours. When taken down, each sheet may be dusted over with French chalk, which will prevent them from adhering. If sufficient wax and turpentine have been used in the mixture, the chalk dusting will not be needed.

Dr. McGhie, in his pamphlet, claims the following advantages for oiled paper as compared with silk:

1. *Economy*.—A sheet costs from one to two cents only.
2. *Transparency and Lightness*.—Applied over a stump or other cut surface, when hæmorrhage may be feared, the state of the part can be more readily seen. On account of its lightness, it is particularly useful in covering extensive burns.
3. *Adaptability*.—It can be nicely applied to any part, retaining the form impressed upon it. It is easily torn, while, at the same time, it can be made of any required strength by doubling or trebling it.
4. *Safety*.—The great objection to oiled silk (or even to gutta percha sheeting) is, that the expense tempts us to use it over and over again; and in this way disease is propagated. There would exist no such temptation with oiled paper, as it could only be used *once*, and all risk of contagion in this way would be avoided.

— That distinguished English physician and philanthropist, Dr. Southwood Smith, is also to be added to the list of lights gone out in the profession. He died at Florence, on the 10th of February, "manifesting," says the *London Lancet*, "to the last, the same calm and happy disposition, and the same unselfish thoughts for others, and forgetfulness of self, as had characterized him through life." To have deserved such a eulogy is not to have lived in vain. So may it be written of us when we pass away.



THE AMERICAN MEDICAL MONTHLY.

M A Y, 1862.

LECTURES, MONOGRAPHS, AND CASES.

The Domain of Medical Police. (Abstract of a Paper read before the New York Sanitary Association, February 6, 1862.) By LOUIS ELSBERG, M.A., M.D.

[NOTE.—The following sketch accomplished, it is believed, some little good by presenting at one view the extensive, and in this country hitherto but little cultivated, field of Medical Police. It is published with the hope of extending its usefulness *pro bono publico*. It must be looked upon but as a “Bird’s-Eye View” of a Domain to the extent or details of which the writer has contributed scarce anything. In some introductory remarks it was stated: “The general survey—though hastily and imperfectly performed, without many claims to originality or profundity, and prepared under the pressure of other duties—is intended to furnish *systematic headings* for the various questions that arise; *shelves*, as it were, upon which you might arrange your knowledge in systematic order; and if the attempt prove a failure, I shall find consolation in view of the vastness and intricacy of the inquiry. Exhausting nothing, I intend to touch upon many things. I shall often but indicate the various points for consideration without ‘passing judgment,’ and again, state conclusions without giving the course of reasoning by which they have been arrived at, or the argu-

ments by which they might be sustained. I intend, briefly, to run over the volume as it were before us, *not* in its separate pages, but by its preface and table of contents.”]

Medical Police—*politia medica*—is an institution necessary to the security and perpetuity of society; a necessity resulting, indeed, from the very constitution of society. It is an integral part of State polity. To obtain a just idea of its nature, objects and limitations, it is requisite to seek primarily clear notions on police in general.

The word *police* is derived from the Greek *πολιτεια*, which Anson defines: the relation in which a citizen stands to a State; the condition and right of a citizen; and again: the life and business of a statesman; hence, government and administration. It is employed to designate those regulations and institutions of a State, a city, or a country district, which have for their object, to secure the maintenance of its internal peace, good order, safety, comfort, cleanliness and health. It is also applied to the body of men or the “civil force” by which the police regulations are executed and enforced.* In contradistinction to courts of law and justice, it has been said by Schürmeyer,† that the latter are concerned only with illegal human actions, while police is concerned principally with interference with the rights of citizens from force of external circumstances and with enforcement of the laws. A paragraph in the Act of the Legislature of our State, passed April 10, 1860, in reference to the Metropolitan Police, (though it contains some points irrelevant to our purpose,) defines the duties of Police so fully that I quote it entire. “It is hereby made the duty of the Metropolitan police force, at all times of the day and night within the said Metropolitan police district, and the members thereof are accordingly hereby thereunto empowered, to especially preserve the public peace; prevent crime, detect and arrest offenders, suppress riots and insurrections, protect the rights of persons and of property, guard the public health, preserve order at every primary and public election, remove nuisances existing in public streets, roads, places and by-ways, repress and restrain disorderly houses and houses of ill-fame; to arrest all street-beggars and mendicants; to provide a proper police attendance at every fire, in order that thereby the firemen, fire-engines (persons) and property exposed may be suitably assisted and protected; assist, advise and protect emigrants, strangers and travelers

* See Blackstone, Bouvier, Webster, Worcester; also, David Booth's Analytical Dictionary of the English Language, London, 1836.

† Handbuch der Medizinischen Polizei, Erlangen, 1856.

in public streets, or at steamboat and ship landings, and railway stations; enforce every law relating to the suppression and punishment of crime, or to the observance of Sunday, or regarding pawn-brokers or mock auctions, or emigrations or elections, or gambling, or intemperance, or lotteries, or lottery policies, or vagrants, or disorderly persons, or the public health, or any ordinance or resolution of common councils, or town or village authorities within the said district, applicable to police, health, or criminal procedure.”*

It is interesting to know that precisely the same language is used in the Act of the “Congress of the United States,” passed August 6, 1861, “to create a Metropolitan Police District of Columbia, and to establish a police therefor.”†

According to Mohl,‡ Police embraces all the various measures and institutions which, by the exercise of the general powers of the community, aim to prevent or remove those external influences that interfere with lawful actions, enjoyments, and possessions of individuals, which the individual cannot wholly or satisfactorily prevent or remove, without a violation of the rights of others or a disturbance of the peace of the community.

From this we may paraphrase the definition: Police is that exercise of the general supreme power of a community which tends to make inoperative the causes interfering with the rights of the individual, and which he cannot remove without a violation of the rights of others, or of the peace of the community. The science of Police is the systematically arranged knowledge of the various means used for this purpose, and of the principles on which they are instituted and the purpose effected; and indicates what authorities must exist, how they should be organized, and what programme of business they should follow.

In the discharge of its duties, the police occasionally encounters conflicting interests; and as the objection has often been made to the institution of *medical* police, that it would interfere with personal rights, the subject of compulsion may perhaps at this stage of our inquiry profitably engage our passing attention.

The right and duty of the police to employ force when necessary

* Laws of New York, 1860, ch. 259, § 29.

† Statutes at large and Treaties of the United States of America, 37th Congress, 1861, chap. 62, section 5th.

‡ Die Polizeiwissenschaft nach den Grundsätzen des Rechtsstaates, Tübingen, 1844.

can, in general, not be doubted. The only question that can arise is: Can the benefits of a particular institution be fully realized by one individual, whether or not another avail himself thereof, or are its beneficial results lost to the entire public, unless each individual in the community conform to it? If the former be the case, compulsion is both wrong and inexpedient, for we may admit no one can well be compelled to accept benefits designed only for his own good, or to protect only his own person or property. Neither can it be left, however, to the will or caprice of an individual, or even, of many individuals, whether or not the remainder of the community shall enjoy certain valuable and necessary protection or not; and it is a principle, universally admitted by jurists and publicists, I believe, that the will, necessities, or rights of individuals can never stand in the way of the rights, necessities, or will of the community.

The limits of compulsion depend principally upon the resistance; and the means of compulsion upon the nature and importance of the protective institution to be established. The more important and indispensable to the community the object to be attained is, the greater may be the force, amounting, according to circumstances, to loss of privileges, property, liberty, and even life; and all these elementary principles are justly applicable to regulations for the protection of the public health.

As far as police is concerned with the physical condition (and especially the health) of the community, it will be seen on a moment's consideration that, in order to attain its object, it requires the possession of medico-physical *knowledge*; and in view of our previous remarks on police in general, we may now define "Medical Police" to be that science which teaches the application of every branch of medical knowledge—or more widely still, of physical knowledge—to the purposes of police.

Medicine bears to police, as medical police, a somewhat similar relation as it bears to law as medical jurisprudence. And the difference, too, between the latter or legal medicine, *medicina forensis*, and *politia medica* is exactly that between law and police. Both, medical police and medical jurisprudence, are embraced in the term State medicine, *medicina publica* or *medicina politico-forensis*.

The *domain* of medical police admits of a division into three departments: (1.) Preservation of Public Health; (2.) Removal of Disease; (3.) Administration of Medical Affairs. These three divisions link, at many points, however, closely into each other. The first embraces not only the maintenance, but also the promotion or improve-

ment of the existing sanitary condition of the community, primarily therefore the exclusion of the causes of disease; the second includes the re-establishment of the perturbed state of public health, specially therefore the cure of diseases; while the third embraces the totality of the various laws, regulations, and institutions referring to medicine.

A system of administrative medicine can be established for a community only after long experience of the proper working of a medical police, and though required by us in order to define the sphere of action of the public health officers, I can at this moment only say, on this head, that the provisions of the Metropolitan Health Bill, emanating from this Association, and now before our Legislature, form, in my estimation, the foundation and outlines of a system which, properly followed up by officials and the medical profession, and extended to medical jurisprudence, gives a reasonable hope that the entire regulation of medical affairs among us will gradually but surely become what it should be.

As to the second division, *i. e.*, the Cure of Diseases, it is plainly the duty of the State, *i. e.* of medical police, to take care that the conditions be not wanting requisite for the restoration of public health. It must ensure, therefore, the existence of the necessary means of cure for the *optional* employment of the individuals, referring both to authorized persons and to drugs, pure and in good order. Besides ensuring this supply for optional use, the community must, in all cases where either from poverty or from other personal and local circumstances the sick individual is incapable of providing himself with the remedial aid he needs, assume to do this also for him. Furthermore is it its duty in epidemics, to publish, as far as expedient and practicable, for the instruction and benefit of the public, any dietetic or other rules of regimen which may be instrumental in alleviating the disease.

The particulars of this division of medical police do not, it is true, fall within the scope of this Association, but, for the sake of completeness, I crave your attention to a brief enumeration:

(1.) To have a competent medical *personnel*, the community requires institutions for its education, and it is the duty of the State to charter, and through the medical police surveil these with solicitous care. It should regulate the admission of students, require a standard of preliminary knowledge, prescribe and facilitate their course of study, and test their competency before licensing to practice. In licensing, specialties, as that of midwives, dentists, oculists, etc., must not be overlooked. The question of the expediency of establishing a tariff

of fees, either for private or public services, or both, reclaimable by law, might arise; and certainly that of transgression of license and suppression of quackery must claim attention.

Instruction of nurses or other attendants and assistants, might also become a subject for consideration.

(2.) The care for proper remedial *matériel* involves licensing of apothecaries, regulation of the sale of poisonous and secret or patent remedies, and inspection of drugs, medicines, and perhaps also, of surgical instruments. The question of establishing here, too, a tariff of prices, with limitations if necessary, might also be considered.

(3.) During the prevalence of an epidemic it would be the duty of medical police to make any extra provision for the treatment of the sick, necessitated by the circumstances.

(4.) Whenever a sick individual is supplied with the aid he requires without its assistance, medical police must not interfere, but it is its duty to procure proper medical and other attendance and provisions when, from any cause whatever, the sick cannot otherwise be provided for.

[For the care of these sick, the following means may be used: (*a.*) General public hospitals; (*b.*) Special hospitals or institutions for the relief of particular maladies, as asylums for the insane, the imbecile, the blind, the deaf and dumb, invalid houses or hospitals for incurables, women's hospitals, children's hospitals, orthopedic institutions, etc.; (*c.*) Dispensaries, or places to which the needy sick can go for advice and medicines; and (*d.*) Dispensary out-door departments, with their district physicians, or physicians for the poor, specially employed by the medical police authorities to visit the sick at their homes.

Either of these means may be partly or wholly supplied by private charity, but medical police must, whenever necessary, encourage or assist their establishment, or else establish them itself; and in all cases it must exercise over them a certain supervision.]

(5.) It is the duty of medical police to prevent the interment of persons only apparently dead. (That persons *have* been buried while really alive, there can be no doubt.) Certificates from physicians, special inspection and investigation before granting permission for burial, and the keeping of all bodies for a certain length of time in dead-houses, before interring them, are among the precautions to be considered. (The duties of coroners are closely related to this subject.)

(6.) Provisions for rescue in apparent death, and from accidents, fall also within the sphere of duty of medical police. Wherever

deemed necessary; therefore, it should provide both means and instruction as to the popular and immediate aid to be given to the drowned, frozen, strangled and suffocated; to persons fallen from heights, or bitten by suspected dogs, cats, &c., or poisoned in any way, or scalded or burnt; to the asphyxiated, from intoxication, foreign bodies in the air-passages, etc., etc.

We now come to the consideration of what I made the first division, *i. e.*, "The Preservation of Public Health," which forms, *PAR EXCELLENCE*, the domain of medical, or, as it is (in this connection) also called, *Sanitary Police*.

The most important and fertile source of *effective public hygiene* is thorough, minute, and extensive *SCIENTIFIC OBSERVATION* of the *sanitary condition* of the community, and the *causes* influencing it. That such observations, or in other words, *skilled sanitary inspections*, can be made only by persons of a medical education—that private physicians cannot make them extensively and continuedly enough for the purpose, and that they require specially appointed *health officers*, surely is too evident to every intelligent person to require much elucidation.

Let any one but *consider* (even if ever so superficially) what duties such inspection involves. It must embrace the whole manner—the *tout-ensemble*—of a man's life and his relation to all natural and artificial agencies affecting health. It must yield scientific *STATISTICAL*, *CHEMICAL*, *MICROSCOPICAL* and *TECHNOLOGICAL* results for sanitary purposes. It requires a health officer to prepare, and keep corrected, a **SANITARY MAP**, (of the district allotted to his inspection,) showing the grade, width and condition of the streets, the sewers, the soil; the vacant lots and the buildings, and a **SANITARY REGISTER**, showing the number and condition of the inhabitants; not only the deaths, but also the diseases occurring in each locality, with meteorological, barometric and thermometric records, as well as occasional chemical and microscopical analyses of the air and the drinking water of a particular locality, of particular articles of food, etc. I do not mean to say that every *medical man* is fit for such inspection, but that none except a person of a *medical education* IS! A health officer, besides making the ordinary medical studies, must pay *particular attention* to the causation, eradication and prevention of disease. And here, allow me for a moment to enter into an explanation of the term "disease." Although it is convenient in description and discussion to speak of disease as an entity, all educated physicians (if not, indeed, all educated persons,) are well aware that what is so designated; has

really *no* personal or ontological character, but is only a condition, and may be defined "a *perversion* either of the functions or of the structure of the body, or of any of its parts." It is, in other words, "a deviation from the normal physiological state or action of the organism under the disturbing influences of morbid causes." In this respect, the positive progress of physical science enables us to stand to-day on altogether a different footing from that of our forefathers. "All pathology is but the physiology of organic perturbations."* The organism never becomes diseased by itself, nor does it ever alone become a cause of disease. Being the source of all manifestations of life, it is at the same time, also, the means of preservation of these manifestations; only that in its material constitution lies the general possibility of becoming diseased. But the realization of this possibility requires the addition of another factor, that may be called morbidic—or literally, sick-making—Cause!

The morbidic cause must, however, not be regarded a unit. In all cases there are really two different factors, only the co-action of which makes up a cause: producing disease as such—*i. e.*, that calls forth the phenomena giving rise to the term. But in many cases, the organism is forced, by original or acquired constitution, to act as second factor when one factor of a morbidic cause has gone into operation. These factors are called, respectively, remote or predisposary, and direct or exciting cause. (One alone has also been called the cause, and the other the totality of circumstances under which it can act.)

Every man, even the healthiest, as we find him, has natural predispositions to disease; every one will therefore, under favoring circumstances, become sick. Predispositions as well as morbidic causes are very numerous and diverse. They are all of interest and importance to the practicing physician, but medical police is specially concerned with such of them only as transcend the ability of the individual to exclude. As to others than such, its province can only extend, according to circumstances, to calling attention, by appropriate instruction and warning, to the danger and the means of avoiding it; as to the former, however, it has the right and the duty to enforce regulations for their exclusion.

The branch of medicine specially concerned with the *annihilation of the causes of disease* has, during the last few years, found many

* *Memoranda Medica, or Note-Book of Medical Principles.* By Henry Harts-horne, A.M., M.D. Philadelphia, 1860.

ardent investigators! A *new name*: *Nosophthory*—literally, the science of eradicating disease—has been given to it, and it bids fair to attain the rank of honor among the medical sciences!

The SURVEY of this domain of Sanitary Police (i. e., *the exclusion of morbid causes*,) may, for our present purpose, be divided into three sections, viz.: I. Total Extinction of Causes of Disease. II. Protective Measures against Contagious Diseases. III. Protective Measures against Miasmatic Diseases.

I. The total eradication of certain diseases may be considered under the two sub-heads: A. Prevention of hereditary diseases; B. Removal of injurious external influences.

A. Hereditary diseases communicated from progenitors to children, or these going free, to children's children, "even to the third and fourth generation," are generally of such a nature that the healing art can do against them nothing, or but little. Medical police must look to the protection of a future member of the community from such serious complaints, the more as he is entirely innocent of their production, is not able in any way to anticipate, avoid, or get rid of them, and as they may—by burdening society with helpless sufferers from those scourges of the human race that ineffaceably stamp upon their victims deformity and disease—become highly prejudicial to the public weal. Among the means to meet this evil, we must first speak of restriction of such marriages as, in all human probability—for there is here no perfect certainty—will lead to the dire result.

The late Prof. Reese, in a Report on Infant Mortality to the American Medical Association, said:

The *physical health* of both parties in every marriage contract should be regarded by each as equally important with the *moral* habits. And as marriage is a *civil contract*, the fruits of which vastly concern the public welfare, (bearing as they do upon the present and future generation,) it is the duty of the State, in every civilized and Christian country, to *surround* marriage with all the sanctions of *law*, and to *protect* the unborn *fruits* of such alliances from *premature destruction* by *statutory* enactments! These should be such as an enlightened science and philanthropy suggest, and should be encouraged and enforced by the united power of religion and law.

He then goes on to lay down: "No marriage should be permitted between parties until the physical health of both has been subjected to professional scrutiny. And such alliances should be *prohibited by*

law, to those of either sex, who are the subjects of those diseases which are known to be hereditary or transmissible to offspring, or such as are fatal to infantile existence. Celibacy *should be required by statute* of all consumptive, scrofulous, scorbutic, gouty, insane, intemperate, and especially *syphilitic* individuals, of either sex; and this, for grave reasons of State, which concern the public weal. Nor will any course, *short* of such legal prohibition of marriage, adequately correct the evil."*

Now, this is strong and positive language, just such as the talented Professor was wont to use, but it admits, in my estimation, of grave doubts, whether marriage can be wholly considered a civil contract which the State has under absolute control, and the unconditional right to prohibit. Is it not rather also to be regarded a domestic institution, which the State has only the conditional right to regulate? Prohibition may conflict with the most important, most sacred, private interests and rights! Nevertheless, I too contend that there *are* cases in which all these must yield to the supreme right of society. (But those who labor to establish among us a thorough sanitary police—and this place is as good as any to lay down the general principle which I wish every friend of sanitary reform would appreciate and act on—should not go too far in their proposals and demands, lest, indeed, as Vetter says: "Embracing on the one hand many objects of ordinary police, penetrating on the other, into the recesses of domestic life, choosing the bride for the husband, calling upon the able-bodied for procreation to marry, and forbidding marriage to the weaker, watching the arrangement and the affairs of the household, the bringing up of our children, and the very morsel that we swallow—medical police would become a greater plague and nuisance than any it could remove, and instead of promoting the health, would only interfere with the best interests of the community.")

Marriages not capable of carrying out their object, and positively injurious to the general good, society must prohibit. Marriages not in this category, yet involving possible injurious consequences to the offspring, may be endeavored to be restrained by suitable instruction and warning, leaving it optional to the parties, according to the circumstances, to enter them or not. From this stand-point the possible prohibition of the following marriages seems indicated: (1.) Marriages before the age of sexual maturity, the precise age to be fixed by law. (2.) Marriages between persons affected with diseases that

* Transactions of the American Medical Association, Philadelphia, 1857.

will *certainly*, or with *very great probability*, be communicated to their offspring, disabling them positively, or that interfere with their mental self-consciousness and responsibility. In this class of diseases insanity and the venereal may be included. (When entirely cured, which must, however, be positively ascertained, there can of course be no reason for prohibiting the marriage any longer.) (3.) Incestuous marriages, in regard to which laws should accurately define the *various degrees of relationship* within which marriage is prohibited.

The next source of hereditary diseases is "Illegitimate Procreation." This opens for discussion the extensive chapters of prostitution, destitution or pauperism, and obscenity or voluntary offences against decency, in which one of the first questions that must be met is: Whether prostitution should by the law be ignored, or sought out and punished, or licensed and regulated. My own conviction is decidedly against both the expediency and the morality of a State's *licensing* such vice, but I concur in the suggestion of my friend, Dr. Griscom, that all prostitutes should be subjected to examination, to determine whether they are affected with venereal disease, and if found diseased, should be sent to the Island to be cured. The whole subject, however, requires grave weighing in all its relations.*

B. In the "*removal of injurious external influences*," Sanitary Police finds its most EXTENSIVE field.

Commencing with the "means for insuring undisturbed *fœtal* existence, laws and ordinances concerning pregnant women, abortion, etc., should be carefully made and stringently carried out. A *dissertation* on "the sources of abnormal conditions of the *fœtus*" formed the inaugural fruits of my medical studies; and I would refer here to my Thesis presented for graduation to the Jefferson Medical College of Philadelphia, for a *résumé* of a subject that should be thoroughly investigated from the stand-point of the medical policist.

(2.) "Removal of injurious influences at the *birth* of children" comes next in order. In this connection, I must add, that *Lying-in-Asylums* for expectant mothers, irrespective of character and civil condition, (*i. e.*, whether married or not,) are urgently called for; but the beneficial working of *Regular Foundling Hospitals*, that have

* A discussion of this subject led to the adoption of a Resolution to "appoint a Committee to present the subject of the limitation of Venereal Diseases for discussion before the Association." Drs. Griscom and Harris were, with the writer, appointed such Committee, whose report will probably be presented to the readers of the MONTHLY in a future number.

lately been so much advocated in our midst, is not so well established, and requires grave consideration.

(3.) The proper "Physical Education," as well as the "Mental," of children, especially of orphans and of poor children, (who have no one else to see to it,) should be carefully *superintended* by medical police.

(4.) Next we must take up the "subject of sound, wholesome, and unadulterated articles of FOOD and DRINK." For the detection of purity or the particular sophistication, some knowledge of, and manipulative dexterity in, analytical chemistry and microscopy on the part of the Health Warden, is imperatively demanded. Barely to enumerate the articles that he must examine chemically and microscopically, we may name

Cereals and flour, bread, potatoes, vegetables, green and dried fruits, pickles and preserves, meats, sausages, fish, butter, cheese, sugar, confectionery, water for drinking and culinary purposes, (including the important subject of aqueducts,) milk, cream, coffee, tea, cocoa and chocolate, vinegar, soda-water, beer, ale and porter, wine, brandy, gin, and other alcoholic liquors, oils, salt, mustard, pepper, and other condiments, etc.

(5.) Protection against influences prejudicial to health, arising from the use of certain household utensils, colored paper, and copper and leaden vessels, &c. (It is of course understood that *absolute prohibition here*—except perhaps to some extent in public eating-houses, and the like—is out of the question; still, much can be done to prevent their injurious consequences, by a proper Board of Health, and competent Health Wardens.)

(6.) Surveillance of various articles of manufacture, as toys, toilet articles, snuff, etc.

(7.) "Healthy domicils and surveillance of domiciliary arrangements." This is concerned with the condition of the *soil*, and position of the particular lot on which the dwelling is erected, the architecture and the building materials, the arrangements for ventilation, sewerage and drainage, the water-closets and cesspools, the introduction and diffusion of heat, light, &c., &c., with *cleanliness in* the house and out of it as its first law. Even the bare enumeration of all the subdivisions under this head would extend this essay beyond its necessary limits. This care, while *most* urgently demanded for tenement houses, with their disease-producing cellar and closet residences of whole families, and crooked and narrow streets, is applicable in many respects

to houses of all classes; for instance, as to injurious wall-papers, too early moving into new houses, etc.

(8.) Clean streets, docks, yards, and public places; removal of ashes, offal, garbage, etc.; removal of all nuisances. Public parks and promenades, public baths, public necessities, hydrants and water-closets.

(9.) The sanitary condition of public buildings, schools, churches, courts, prisons, (including, of course, the food, clothing and occupation of prisoners,) and other public institutions.

(10.) Removal of injurious effects of various trades, manufactures, arts and occupations. This refers both to the injurious effects on the health of the individuals engaged in any particular business, and to its noxious influence on the health of the community in which it is carried on. Here, too, a wide field is open for public hygiene and sanitary reform. Its cultivation discloses the REMOTE CAUSES of many diseases, and refers them to evils in our civil state, many of which might *easily* be removed. I pass on without specifying the various branches of human industry, and without alluding to military, navy, and merchant ship medical police, which all belong to this division. I must, however, say, that several occupations generally supposed to be injurious, are really, or can be made, entirely harmless with proper hygienic regulations.

(11.) "Prevention of injurious emanations to the community from its burial-grounds." This necessitates regulations for the transportation, and place, and manner of interment of the dead.

(12.) Precautions against the indiscriminate sale of poisons.

(13.) Precautions against dangerous animals, to prevent hydrophobia, &c.

Precautionary measures against suicide, drunkenness, and injuries inflicted by insane persons, &c.

Precautionary measures against injuries from falling down of objects, against falling into the water, or into pits, excavations in the street, against injuries at fires, &c., and prohibition of certain imprudent acts dangerous to public health or life; and

(14.) Precautionary measures against explosions, against dangers in public conveyances, on cars and steamboats, and on ice.

Having thus rapidly run over our first section of the Domain of Sanitary Police, (which embraced the total *eradication* of certain causes of disease,) we may cast a few glances towards the two remaining sections: namely, the institution of Protective Measures

against *contagious* and *miasmatic* diseases. We shall look at these very cursorily.

Endemic diseases depend for their production on *LOCAL* conditions, as geographical position, soil, climate, manner of life, drinking water, food, supply of air and light, &c.

Epidemics depend, generally, on particular conditions and foreign ingredients in the *atmosphere*.

Infectious diseases (including under this name, for the sake of convenience, *all communicable* abnormal conditions, therefore both *contagious* and *miasmatic* diseases,) depend: (1.) On the communication to the organism of some material cause of a disease, (*materies infectionis*;) and (2.) On the *susceptibility* of the organism—*i. e.*, on its capability of becoming affected thereby so that a disease *sui generis* is the product of the infection: or communication. Without the infection on the one hand; and the susceptibility on the other, there can be no infectious disease. The best means, therefore, for protecting mankind from all *existing infectious diseases* is that which *destroys* the *susceptibility* to become affected thereby, if that can be accomplished *without* injury to health. Now, while there are indications, and reasonable grounds for the hope that the unceasing progress of the physical sciences will eventually—aye, perchance very soon, [for even at this moment but a few links are wanting in the chain of evidence,]—satisfactorily solve this problem, *we already do possess* that means in relation to one of the most *terrible* afflictions of humanity—*SMALL-POX*—which formerly attacked one-half of the whole *human race*—and almost regularly either *killed* or *for life disfigured* its victims. That the protective means at our command—vaccination—is *imperatively required* by society, seems superfluous to state—and that it is the duty of medical police to use *coercion, if need be*, to *APPLY* IT, is (after my remarks on compulsion in the beginning of this paper) self-evident.

On the question: How *should* and *can* compulsory vaccination be *accomplished*? I hope to have at a future time the privilege of addressing you.

As to *miasmatic diseases*, it is urged that *QUININE*, taken during exposure to malarial influences, possesses the power of preventing them.

The endemic; *Cholera infantum*, undoubtedly has, as its causation, the three elements: Intense summer *HEAT*, the *atmosphere* of large *CITIES*, and the peculiar susceptibility of *infants*. (Of these, the

second is, of course, most under control, by removal to the pure air of the open country.)

Again, the mode of causation of *typhus fever* appears to be placed beyond a doubt! It seems to depend, *in the first place*, upon the one *essential* cause, *Ochlesis*, or CROWD-POISON! Yet *when* shall we hear *no more* of Jail fever, camp fever, ship fever, and by whatever other synonyms and “aliases” typhus ravages humanity! “Wherever the excreta of human beings from their lungs and skins, as well as bowels and kidneys, *accumulate* in an unrenewed atmosphere for a considerable period, TYPHUS WILL BE PRODUCED. Then it becomes infectious: both miasmatic and contagious; *i. e.*, not only do certain *places* become tainted with it, so that all persons abiding there, are liable to it, but a *single patient* with typhus, taken to a *new neighborhood*, may generate the disease in other persons. The excretory zymotic agent, which ordinarily requires *numerous* bodies to afford it in typhus-breeding quantity, is so *concentrated* and *dynamized* in the body of the patient, sick with the fever, as to have in it the poisoning power of a whole crowd! Thus, in typhus, the morbid poison is originated by the alteration and accumulation of matters *naturally produced in the body*. It is not so with the contagion of small-pox—the *origin* of which is not thus controllable by circumstances, in the absence of its specific cause, nor is it so with the *localized* infection of yellow fever, or the *migratory* poison-cause of cholera.” What a field there is here for a proper medical police—what results can crown its labors—is obvious! A similar remark, almost, applies to endemic TYPHOID fever, although its causation is involved, as yet, in far greater obscurity. That it can be—and frequently is—produced by putrid exhalations of some kind, and in many instances by emanations arising from sewers, there can, however, be no doubt. It was of this disease that Prince Albert of England died!

The fertile and abused subject of *Quarantine* I must pass by. Good in its place, how bad is it out of place!

In the protection of localities, it is believed that the most desirable quarantine is a *dirt quarantine*. “Annihilate or exclude *dirt*, *i. e.*, putrefiable animal and vegetable detritus, and no *migratory* or *malignant* morbidic poison can sustain its existence even if its cause be imported to the spot!” Thus it is maintained that, by sanitary reform, ALL MALIGNANT EPIDEMICS ARE PREVENTABLE; and it is interesting to know that this has been proved, even as regards plague, once the most destructive of all pestilences, and looked upon as the very *type* of *contagion*! It has now, so to speak, died out in those cities of the East

to which it was formerly a *frequent visitant*, if not an endemic Long ago it was finally excluded from all the parts of *Western Europe*, not by quarantine, but by improved *local* SANITARY ARRANGEMENTS! Its fountain-head, the great Oriental capital, *Cairo*, before the time of Mehemed Ali, many times lost tens of thousands of inhabitants by its visitations. From here it spread, devastating over Egypt and the world! The viceroy named, and his son, Ibrahim Pasha, (though unaware of the stupendously beneficial results of the undertaking,) removed the hills between Boulâq and the mouth of the Nile, and transformed an immense swamp in the heart of the city, and the *receptacle* of all its filth, into a park, (or olive and fruit-bearing pleasure garden—the “Esbekiah.”) Other local sanitary arrangements were enforced, and now CAIRO (*and with it, all humanity*) IS FREE FROM PLAGUE!*

* * * * * *

In conclusion, let me repeat five words, which we can never too often reiterate in the ears of the public and of our Legislature—five words of *Truth!* and *Hope!!* and *Charity!!!*

“*All malignant epidemics are preventable.*” “By attention to the laws of public and domestic hygiene, all malignant epidemics are preventable.” This truth must become the gospel text of the Evangelists of Sanitary Reform! Promulgated through all the avenues to the public mind, every civilized community must appreciate its import, and would soon, by appropriate sanitary measures, realize some of its promises!

“All malignant epidemics are preventable,” AND CAN BE PREVENTED by attention to the laws of hygiene, which it is the object of *this Association* to have systematized and acted upon in the Metropolitan Health District! SHALL *they ever be prevented among us?*

Well did the Sanitary Committee of our Board of Health for 1849, say: “To no other work should the authorities address themselves more earnestly than the establishment of a *thoroughly organized medical police*. * * * The *advantages* of such a measure would be *incalculable*.”

Well did the State Senate Select Committee, in 1859, say: “Preventive Medicine, rising rapidly to the perfection of a science, is capable of exerting a vast influence over the welfare, physical and moral, of the human race!”

* See the subject of *Etiology*, Hartshorne's Memoranda Medica, Philadelphia, 1860.

Well did Dr. Griscom, *before this Association*, but a few months ago, quote Mr. Simon's words: "*Preventive Medicine* will effect INFINITELY MORE for mankind than all the DRUGS which have *yet been discovered*, and all the *curative skill* which has *ever* been exerted for the *alleviation* of disease."

Mr. President, and Members of the New York Sanitary Association: Fellow-Citizens of our beloved Empire City: Let us hope that the happy hour is near at hand when the Metropolis of the New World can partake of the fruits of a Medical Police!

On Cainca. By JOHN C. PETERS, M.D.

(Continued from February No., p. 101.)

CASE 11.—A robust man, aged 42, was attacked with dropsy of the legs, without known cause; he took fifty-six grains of the extract in two-grain pills in the course of one morning, in place of four days, as had been directed; he suffered for forty-eight hours with super-purgation, followed by recovery, so that he was able to attend to his business at the end of seventeen days.

CASE 12.—A robust woman, aged 45, had suffered for three months with frequent and severe attacks of palpitation, coincident with great scantiness of the menses, and general anasarca; she had occasional attacks of fever at night, followed by non-relieving perspirations; she was habitually constipated, with constant scantiness of urine, which varied from clear to turbid in its appearance. Purgatives and blood-letting had not relieved her; she then took cort. rad. cainc., one drachm in two doses, in one-half glass of white wine; and on the following day, one drachm at one dose, without immediate perceptible effect; but on the following night such profuse diuresis occurred, that the swelling of her face subsided almost entirely. On the fourth day she took two drachms infused in water, in two doses, followed by two stools, and profuse discharges of clear urine, cessation of thirst, and considerable decrease of the swelling of the legs; but the palpitations still continued unrelieved. The medicine was discontinued, and on the twenty-first day all her previous troubles had returned; the cainca was again resumed, followed by profuse diuresis and diminution of the dropsy; but the patient refused to continue it, until rheumatic pains sat in, followed by increased swelling of the legs, pains in the kidneys, and profuse leucorrhœa. The powdered cainca was now

given, two drachms at one dose, followed by two stools and discharge of urine in perfect floods; on the following day menstruation sat in freely and regularly, and in the course of a few days the dropsy had all disappeared, and she had no subsequent relapse.

CASE 13.—A man who had suffered for three months with disease of the heart and general dropsy, took one-half drachm doses of cainca, night and morning, for three days; it did not act upon the bowels; the urine was only slightly increased in quantity; but its color was changed from red to the natural amber; the dropsy did not diminish. Doubtless if the remedy had been persisted in, more decided effects would soon have followed.

CASE 14.—A woman, aged 78, had suffered for a long time with heart disease; had been dropsical in the face and legs for upward of a year, and in addition, had cough, with much expectoration, loss of sleep and appetite, scantiness of urine, and moderate thirst. After taking twelve grains of extract of cainca, she had six stools, and profuse diuresis, preceded by restlessness and discomfort; her age and debility led her physician to discontinue the medicine.

CASE 15.—A woman aged 65, with very decided enlargement of the heart, had had dropsy of the legs for three months, which was making rapid progress upward; she had but little appetite, thirst or sleep; pulse 125. On the first day she took sixteen grains of the extract; on the second, third, and fourth days, 20 grains; the sixth and seventh days, twenty-four grains; and finally, ten to twelve grains every other day, for nine days more. Almost from the commencement of treatment she had two or three stools per day, and such increase of urine that she often passed between four and five pints per day; from the seventh day onward she had more or less perspiration at night. A diminution of the dropsy commenced on the third day, and the pulse fell to 112; on the seventeenth day she could be regarded as almost well, and was dismissed as cured, as far as the dropsy was concerned, on the twenty-eighth day.

CASE 16.—A woman with ascites took two drachms of the powder at one dose, followed by twelve stools, profuse diuresis, and great relief; she begged to take a second dose herself, but soon after left the city, and did not again report herself.

CASE 17.—A woman aged 35, suffering with ascites for two years, had already been tapped five times; she was much troubled with palpitations, cough, and vomiting; her appetite and thirst were nearly natural, and her urine clear, but scanty. Sixteen grains of the extract were followed by eight profuse passages, but by little or no increase

of urine; on the third and fourth days she took twelve grains, followed each time by six watery stools, and no increase of urine; still the abdomen seemed smaller and softer; the occurrence of pain in the side prevented her from continuing the remedy.

CASE 18.—A woman aged 60, who had suffered for some time with ascites and dropsy of the legs, took one-half drachm of pulv. cainca in one-half glass of water, and repeated the dose at the end of two hours, as the first was almost immediately vomited off; her bowels commenced to operate in three hours, and she had five copious stools, followed towards evening by a large quantity of clear, less red, and very frothy urine. On the third and fifth days she took one drachm divided into three doses, followed each time by three stools, and very greatly increased discharge of urine; the swelling of the abdomen and legs had decreased so much that the patient regarded herself as well, in which opinion the physician was obliged to coincide, as he could obtain no more of the remedy.

CASE 19.—A dropsical man aged 55, whose abdomen and legs were very much swollen and hard, took thirty grains, followed by seven stools and profuse diuresis.

CASE 20.—A delicate woman aged 59, with ascites and anasarca, tenderness of the abdomen, white-coated tongue, weak but regular pulse, loss of appetite, and scanty acrid urine, took four grains of the extract every hour for three doses, followed by pain in the stomach, colic, and oppression; but in the course of a few hours she had one copious stool, and more profuse and less acrid urine. On the second day she took four doses of four grains each, followed by three stools with colic, which lasted for many hours, profuse discharges of urine, and sleep lasting five hours, which had not occurred for a long time. On the fourth day she took fourteen grains, followed by four stools without decided colic, and very great diminution of the abdomen. On the fifth day she took eighteen grains without any very evident effect. On the sixth day she took three doses of four grains, each followed by vomiting, without distress or effort, of a large quantity of thick, yellow bile; the urine continued to flow freely, but not excessively copiously; still the abdomen became smaller and smaller, the extremities quite flabby, and she could move with ease. On the fourteenth and fifteenth days she resumed the use of cainca, followed by profuse diuresis, but little or no action on the bowels. As no more of the remedy could be procured, uva ursi was substituted, but not before the patient felt almost well; and of the anasarca, only a little swelling of the feet

and walls of the abdomen remained, while the ascites had almost entirely passed away.

CASE 21.—A woman aged 60, who had ceased menstruating for ten years, had ascites with well-marked distension, hardness and fluctuation of the abdomen, dropsy of the legs, cough, oppression of the chest, no appetite, scanty, red, and acrid urine, difficult and scanty stools, and a profuse serous leucorrhœa. On the first, fourth, and sixth days, she took twelve to sixteen grains of the extract, followed by purging and diuretic action, without any irritation or inconvenience, attended with a diminution of the swelling of the legs and abdomen. The remedy was suspended for eight days, but the diuresis and diminution of the dropsy continued, while the leucorrhœa ceased. After taking sixteen grains more, the ascites seemed to have entirely passed away; the patient regarded herself as well, and certainly appeared so for the seven weeks that she subsequently remained under observation.

CASE 22.—A man aged 33, with jaundice, ascites, and anasarca, was seen when in a hopeless condition, and received 12 grains of the extract of cainca, followed by a very dark, pitch-like passage, although his bowels had previously been obstinately constipated, and by the discharge of a very large quantity of dark, brownish-yellow urine, which had previously been very scanty, turbid, red and acrid.

CASE 23.—A woman aged 57 had suffered for eighteen months with ascites and anasarca, and had been treated for eight months, without benefit, with digitalis, squills, &c. She then took 78 grains of extract of cainca, 28 grains of acid. cainicum, in the course of eight days, aided by several doses of croton oil. The action upon the kidneys was great, and the swelling of the legs almost subsided. She died on the ninth day, and was found to have enlargement of both ovaries.

CASE 24.—An originally robust woman, aged 33, had suffered for three years with enlargement of the heart, and after using much digitalis, squills, and nitre, was found in the following condition: Her legs were enormously swollen; abdomen greatly distended; the loins and hips excessively œdematous; heart beating violently over a large surface; inability to lie down; constipation, but little thirst; no sleep; appetite passable; tongue moist, and clean; urine red, scanty, and hot; suppression of menstruation for two years. On the first day she took 16 grains of the extract of cainca, on the fourth and sixth days 20 grains, and on the seventh 12 grains. Soon after the first dose she commenced and continued to have black, tarry stools, and a six-fold increase of urine. On the eighth day, in consequence of slight

dysenteric symptoms, she took some confection of senna, followed by nine copious stools, and increase of the quantity of urine, with more or less malaise. On the tenth day she took 20 grains of the extract, succeeded by increased diuresis, entire disappearance of the dropsy of the loins and hips, and diminution in size of the legs. On the 17th and 19th days she took 20 grains; on the 28th day, 16 grains; on the 34th and 36th days, 24 grains each. After the transient discontinuance of the remedy on the tenth day, the dropsy of the legs gradually passed away, and on the 34th day the ascites had also disappeared; but then a large tumor of the right ovary was discovered. The diuresis persisted, as also the action on the bowels, so that the patient always had two or three, sometimes seven, and after the last dose twelve stools, without colic. The palpitation and other distress about the heart lessened so much, that she could walk a little, and be carried outdoors. Fourteen days after the last dose, there had been no return of the dropsy, and her appetite and sleep were good. During the whole course of the treatment the cainca produced no gripings or gastric irritation, while the heart affection was decidedly relieved and palliated.

CASE 25.—A boy aged $6\frac{1}{2}$ years had been sick for over a year, with attacks of fever and diarrhœa, followed by disease of the heart and dropsy of the chest and abdomen. His face was sallow, skin dry and warm, pulse frequent; his heart beat over an extended surface—there was dullness on percussion over a large portion of the left side; his abdomen was hard and very much distended, with fluctuation; his feet and legs were swollen; his breathing oppressed, with more or less cough, especially towards morning; his appetite poor; bowels constipated; more or less thirst; urine scanty, red, offensive, and acrid. He was inclined to sleep much. On the first and fourth days he took 6 grains of the extract; on the seventh day, 8 grains; and on the eleventh day, 4 grains, in two-grain doses. Increased secretion of urine quickly took place, and soon it lost its offensive character. On the fourth day he had two, and on the seventh day seven, yellow fluid stools, after which his legs and abdomen almost recovered their natural size; his heart beat more quietly. On the tenth day great tumefaction of the liver was discovered. The improvement and profuse diuresis continued until the 20th day, when he took 4 grains more, followed by three copious stools, and the usual diuretic action. He continued to improve until the 34th day, when a vomica burst. The dropsy did not return.

CASE 26.—A woman aged 52, who had ceased menstruating for

three years, was suffering with enlargement of the heart and some cough, with ascites and dropsy of the feet and legs. In the course of five weeks she took 75 grains of the extract, in 15, 16, and 30 grain doses, and 47 grains acid. cainicum, in 4, 6, 10, 12, and 15 grain doses. It acted in the usual way on the bowels and kidneys. On the third day the abdomen was so much lessened in size, that an enlargement of the left ovary could be discovered; and on the eighth day there seemed to be no more fluid in the abdominal cavity, but the feet and legs remained much swollen. She left the Hôtel Dieu before she was perfectly well.

CASE 27.—A woman with dropsy of the left side of the chest took 20 grains of the extract, in 4 to 6 grain doses, every hour, on the first day, and 24 grains on the third day. Profuse diuresis was the first effect, followed by three watery stools, with some colic; the urine became natural in color; the digestion did not suffer; the respiration and cough improved; but the patient thought she became weaker, and refused to continue the remedy.

CASE 28.—A woman aged 36, who had aborted at the seventh month, two months previously, and who had suffered with diarrhœa for three months, was found with considerable dropsy of the legs, ascites, and hydrothorax. In the course of two months she took 166 grains of the extract internally, and had two clysters of 36 and 24 grains each, besides taking 44 grains of *acid. cainc.* The doses were administered on the 1st, 2d, 4th, 7th, 8th, 9th, 12th, 14th, 19th, 20th, 21st, 23d, 37th, 43d, and 55th days; but although the usual diarrhœic and diuretic actions followed promptly, yet the anasarca diminished but little, and that only occasionally, while the ascites lessened not at all; on the contrary, on the eighth day, fever, with restlessness, sleeplessness, and difficulty of breathing occurred to such an extent, that paracentesis was performed, and 8 lbs. of clear fluid evacuated. No particular improvement occurred for seven weeks, when, under the influence of from five to seven watery stools per day, and profuse diuresis, the abdomen and legs began to diminish in size, so that in the tenth week an enlarged and granular liver could be detected, and an enlargement of the right ovary. She recovered entirely, as far as the dropsy was concerned.

CASE 29.—A woman, aged 68, who had suffered with colics for five years, and disease of the liver for three years, after an injury to the right side, was attacked with ascites, attended with oppression, severe colics and fever. For five days she took 4 grains of the extract, night and morning; then, after an intermission of four days, she too

15 grains per day for four days; on the 16th day her abdomen was natural in size, and her appetite and strength had returned. She was attacked eight days subsequently, after great imprudence in diet, with enteritis, followed by a return of ascites, and she died of colliquative diarrhœa in 19 days.

CASE 30.—A man with chronic laryngitis and œdema of the legs took 8 grains of the extract in two doses, one night and morning, for almost complete suppression of urine; it acted profusely on the kidneys, and produced a decided diminution of the anasarca.

CASE 31.—A woman, aged 37, who had been dropsical for four years, was treated successfully with *acid. caincic.*; it was remarkable that almost every dose produced repeated vomitings of slimy, thick matters, with great relief to the patient. The actions upon the kidneys and bowels were very copious and frequent. The patient had been tapped several times previous to taking the cainca, and the whole disease seemed connected with suppression of the menses.

CASE 32.—A woman, aged 51, had general dropsy and ascites, with oppression of the chest and some fever. Digital., squilla, Oenon. spinos, colocynth, and other remedies had failed. Then rad. cainca, 2 drachms, was infused in 8 ozs. of hot water, and given in table-spoonful doses every two hours. On account of the weakness of the preparation, little or no effect was produced until the 4th day, when the remedy, aided by simple injections, commenced to act upon the bowels, and for seven or eight nights in succession she had three to five stools, with more or less griping, and this diarrhœa continued in a modified degree for three weeks after the little stock (2 drachms) of cainca had been exhausted. On the seventh day of treatment the urine commenced to flow copiously and almost involuntarily; she generally passed at least 16 ounces every night, and more by day. The dropsical swelling abated considerably; her strength was maintained in a wonderful degree; the skin became moist, and the ascites lessened. The cainca was given for only nine or ten days, still its good effects continued for three or four weeks; but gradually its good effects lessened, and then ceased, and as no more of the remedy could be procured, the patient gradually succumbed.

CASE 33.—A robust soldier, aged 60, suddenly became dropsical; after the failure of several remedies, he was received in the Hospital St. Louis with ascites and general anasarca, coupled with some enlargement of the heart; pulse rather slow; urine red, and only a few spoonfuls were passed, with pain; bowels pretty regular. He took an infusion of 2 drachms cort. rad. cainca, in 8 ounces of water, in

two doses, at an interval of two hours; in the course of 24 or 36 hours he had three copious, watery stools, and profuse diuresis, and his appetite returned. On the third day the same dose was repeated, and he had five stools, and passed nine lbs. of urine in fourteen hours; the dropsy was lessening decidedly. The improvement continued for fourteen days, without a repetition of the medicine, the patient having from three to five watery stools per day, and passing from twelve to fourteen lbs. of urine every 24 hours; his appetite was good and digestion easy, while the only remains of the dropsy were a little swelling upon the back and inner sides of the thighs; he took a third dose of cainca to hasten the cure, which was soon complete.

CASE 34.—A man, aged 37, just recovered from syphilis, was attacked with ascites and general dropsy, with great debility; his urine was exceedingly scanty and red, and his thirst insatiable; pulse slow and weak. He took the above decoction of 2 drachms of cainca, in 8 ounces of water, in three doses, at intervals of an hour. On the following day his appetite was better, although he had had some nausea after the first dose; his urine became more copious and clearer, and he had seven not debilitating stools. He took no more cainca for five days, yet passed from six to eight lbs. of urine per day, and had from three to five copious watery stools daily; the ascites had almost entirely disappeared, and the swelling of the scrotum and legs had lessened considerably. Two days after the second dose he had thirteen or fourteen almost watery stools, and an almost continuous profuse discharge of urine; his appetite and digestion were good. He was dismissed cured at the end of four weeks.

CASE 35.—A soldier, aged 40, had dropsy of the legs, scrotum, and walls of the abdomen. He took the above decoction on the first and second days, followed by a considerable increase of the previously very scanty and thick urine and six copious stools, without colic; after the second dose he had 15 or 16 white or almost watery stools, with violent colic, and the discharge of eleven lbs. of scarcely yellow urine. The patient was weak, pale, and lost his appetite. The colic, diarrhoea, and diuresis continued in a modified degree for three days; on the fourth day the scrotum had almost regained its natural size. On the fifth day the cainca was repeated, and he passed almost 14 lbs. of urine, and quickly recovered without further treatment.

CASE 36.—A man, aged 32, had suffered for some time with disease of the heart; had been dropsical for four months; he was swollen up to his arm-pits; his urine scanty. He took the above decoction every other day for ten days, followed by profuse watery stools, with-

out much colic or loss of appetite; the increase of urine was not very great. He had some vomiting after the last dose, and recovered quickly.

CASE 37.—A man, aged 44, who had just recovered from syphilis, entered the hospital with his abdomen so much distended, that it seemed as if the skin would burst; his legs and scrotum were greatly swollen; his breathing much oppressed, with signs of œdema of the lungs; pulse hard. He took the cainca every other day for 12 days; the urine became copious and almost colorless, and he had from two to five stools daily; his legs became smaller, his abdomen softer, his appetite good, and breathing comfortable. He was comparatively well in a month.

CASE 38.—A young lady, aged 20, had been dropsical for three years; her urine was dark, scanty, and more or less acrid, and she had profuse leucorrhœa; her menses were not suppressed. On the first, second, and third days, she took 12, 14, and 16 grains of extract of cainca at one dose, on an empty stomach; on the fifth, sixth, and seventh days, 18 or 20 grains, in two doses; and, after a pause of six days, took 24 grains daily, either at one or in two doses. It acted principally upon the bowels, causing from two to three or five copious watery stools; still the urine became clearer and more profuse; her appetite, sleep, and color returned. When the remedy was omitted the disease increased again, but as soon as the cainca was resumed her appetite improved, the urine flowed more freely, and perspiration sat in. On the 23d day $\frac{1}{2}$ drachm of the remedy was given in an injection, followed by three watery stools, with nausea and colic. No more cainca was given, but a profuse diarrhœa continued for a long time, until she entirely recovered.

Notes on Venereal Diseases. By F. J. BUMSTEAD, M.D.

The Distinct Nature of the Simple and Infecting Chancre. Challenge (at the Point of a Lancet) of Dr. Ed. Langlebert by Diday.

The old doctrine of the unity of the chancrous virus, first exploded in modern times, by Bassereau, finds few advocates at the present day among writers upon venereal diseases. Evidence constantly accumulates that a difference in the idiosyncrasies of persons exposed, which was so long regarded as the cause of the different effects of contagion, failed to satisfy the minds of the profession, and that the

announcement of the distinct nature of the two species of chancre has been generally received with favor, because it alone satisfactorily explained facts which had come under the observation of almost every practitioner. As a recent indication of the spread of the new doctrine upon this subject, may be mentioned the fact that at the great Congress of German naturalists and physicians, held at Speyer, last autumn, the subject of syphilis came up for discussion, when "most of the physicians present were inclined to assume the existence of a twofold virus."—(Foreign Correspondence of the *Medical Times and Gazette*. See number of this Journal for December 7, 1861, p. 589.)

Among the few who still withhold their adhesion to the duality of the chancrous virus is Dr. Ed. Langlebert, of Paris, who has recently published a series of articles in the *Moniteur des Sciences*, in which he endeavors to prove that "the infecting and simple chancre are not distinct pathological species." Hence has arisen one of those challenges between scientific opponents to submit their views to the test of experiment upon their own persons, for which our French brethren are somewhat famous.

The well-known writer upon syphilis, Diday, of Lyons, who is a *dualist*, (if not also a *duelist* in the present instance,) has written a letter to Dr. Langlebert, which appears in the *Moniteur des Sciences* for February 11, and in which he proposes to meet him at Dijon, accompanied by two patients, the one affected with a simple, and the other with an infecting chancre. Dr. Langlebert was to choose a friend who should inoculate Diday with the secretion of the simple chancre; and a friend of Diday's was to inoculate Langlebert with the secretion of the infecting chancre. The succeeding twenty-four hours were to be passed in friendly *tête-à-tête*, that each might be sure that the other did not fly to the casemate of cauterization, before the bomb had time to explode; when they were to separate, free to employ any means in their power to arrest the progress of the virus. Since, according to Langlebert, the simple and infecting chancres are identical, he would run the same risk as Diday; and the proposition of the latter would satisfy all the requirements of the Code; each would give evidence of his faith in his own doctrines; and the result would go far to indicate which was in the right.

It appears, however, that Langlebert could not see the matter in the same light, for he declined Diday's proposition, alleging as a reason, that, whatever the result of the inoculation of the infecting chancre upon himself might be, it would be of no value in settling the point in question; for, said he, should it produce a chancre with

a soft base, it might be alleged that this was due to previous taint, either hereditary or acquired; if, on the other hand, a hard chancre followed, the result would be equally unsatisfactory to him, (Langlebert,) since he does not deny that an infecting chancre may produce an infecting chancre; on the contrary, he admits that it does so in the majority of instances, but he believes that the one species may give rise to the other, and *vice versâ*.

To this Diday replies in the following terms: "I admit with you, *cher confrère*, that the point of doctrine upon which we differ would not be settled by the experiment I proposed to you. But, allow me to remark, it begins to be cleared up by the very fact of your refusal.

"Let us show our cards. Each of us has now a measure of the other's courage in this matter. Between old specialists like ourselves, what is the use of concealing what everybody will think and say? For the interests of science, we might readily consent to contract a soft chancre; but never, to support any theory whatever, would we expose ourselves voluntarily to true syphilis. Upon this point we are agreed; are we not?

"Now, listen to the conclusion. If I consent to inoculate myself with a soft chancre, it is because I am sure that I shall thereby contract nothing but a soft chancre. If you refuse to inoculate yourself with an infecting chancre, it is because you are equally sure that the result can be nothing less than an infecting chancre and constitutional syphilis.

"But you will say, 'By what right do you thus interpret my meaning? By what right do you pretend to regulate my conduct by your opinions? I believe that in inoculating yourself with the virus of a soft chancre, you would run *less* risk than I in inoculating myself with the virus of an infecting chancre; but I believe, nevertheless, that you would run some risk; and however small the danger might be, I could not consent to expose you to it. Your imprudence in incurring it is no proof, nor even a presumption, that it does not exist; and should the inoculation of an infecting chancre upon myself chance to give me syphilis, it would be far from proving that the result would be the same upon everybody, after a like inoculation.'

"Very well answered, I reply in my turn, *cher confrère*. But is your refusal irrevocable? It cannot be; for since it is based upon a mere calculation of chances, I have only to come to the assault with sufficient forces at my disposal."

"You state explicitly that an infecting chancre most frequently

produces an infecting chancre. This is acknowledging that a soft chancre produces the same result less frequently. What is the comparative frequency of the two, according to your experience? Is it four, six, eight, or ten to one? Call it the last-mentioned ratio, if you will. Then, if I prove to you that a soft chancre, inoculated upon ten persons, does not in a single instance produce an infecting chancre; and if I prove, on the other hand, that any individual, taken at random, (I mean yourself,) and inoculated with an infecting chancre, will not fail to contract an infecting chancre, will you not agree with me that this result will serve at least as the commencement of a demonstration?"

"I would therefore reiterate my offer upon the same conditions, with this difference, that instead of submitting myself alone to the inoculation of a soft chancre, ten friends shall also come with me, who have already expressed their willingness to put to the test their faith in a doctrine which alone can reconcile theory with facts. And when, *ten times in ten*, the soft chancre fails to produce an infecting chancre; and when an infecting chancre, *upon the first trial*, gives rise to an infecting chancre, we will let you explain the facts as you please; but you cannot prevent the result—nor your refusal, if you again refuse—from having its due weight with disinterested judges."

To this second challenge Langlebert has not as yet replied.

Transactions of the Medical Society of the County of Kings.

REGULAR MEETING, JUNE, 1861.

Dr. JONES read the following case:

Mrs. F., æt. 27 years, an English lady, residing about seven months in this country, of healthy parents, always residing in the country when in England, and enjoying generally very good health, was delivered by me of a female child after a labor of about six hours, on Tuesday, May 1st, 1860, at 5.20 P. M.

It was a primipara and first presentation. After the delivery of the child, I found the placenta in the vagina, which I delivered, the womb being well contracted, constituting one of the easiest cases it had ever been my fortune to attend. Her bowels were opened on the following morning, by an ounce of ol. ricini, containing a tea-spoonful of tinct. opii camphorata. She urinated during the night, and also at the time that her bowels moved. No change or circumstance occurred

which indicated other than a happy result of her confinement, until Thursday night, at which time she became very restless, moaning and laboring under considerable nervous excitement. I was so informed by the nurse at my visit on Friday morning, at which time I found she had a little fever, a pulse of 100, face slightly flushed, and complaining of wind in her stomach and bowels. I examined her abdomen, but could not detect any tympanitis or pain, either on slight or firm pressure. I ordered the oil to be repeated, together with 3ss. spts. terebinth., and 3j. tr. opii camph., and the abdomen to be entirely covered with a flannel bag containing hops that had been steeped in hot water. Saturday morning she was completely relieved of all unpleasant symptoms complained of the day before, being entirely free from any pain, and expressed herself as being quite comfortable; she had secreted her milk, and her lochia was normal.

At my evening visit, having been sent for, I found her pulse 115 per minute, her respiration 25, and her skin hot and pungent, not unlike that of scarlatina. I ordered spts. mindereri, nitr. æther, three parts of the former to one of latter, and ten grains of pulv. Doveri, the latter to be taken at 9 o'clock P. M.

Her condition remained nearly the same until 12½ P. M., when I found that her pulse, since my last visit at six P. M., had gradually advanced, and not being able to satisfactorily account for her condition, I ordered a consultation to be held early in the morning.

Sunday, 6th, 6 o'clock A. M.—Pulse 145; respiration 30. Tongue dry, tip red, shanny colored; posterior somewhat mottled. Urinated about one pint early this morning, and one pint during the night. Slept at short intervals an hour or an hour and a half, amounting to about six or seven hours during the entire night, but she informed me that she did not feel refreshed by it in the least.

Her skin still the same, with moisture in palms of the hand and soles of the feet.

Complains of pain or tightness across the chest; has slight headache. I ordered a cataplasm to the chest, and a gentle saline aperient 9 o'clock, in consultation with Dr. C. E. Isaacs; condition about the same. Dr. I. thought he discovered a very slight crepitation under the right inferior angle of the scapula, with a slight shortening of the respiratory murmur from the opposite side.

Her saliva by test was slightly alkaline; her urine and perspiration were neutral to test paper; her fæces smelt a little sour, but were also neutral. Dr. I., to use his own language, remarked, that "the enemy was there, but what form he would assume time alone would tell;" in

other words, it was impossible to tell the cause of so great a disturbance by any phenomena present. It was decided to place the system immediately, but very gently, under the influence of submurias and opium; therefore, the following:

R.—Hydr. chlor. mitis, - - - grs. ij.
Pulv. opii, - - - gr. j. M.

One to be given every three hours; continue the mindereri mixture, and give a full dose of Dover's powder at night, to produce sound sleep.

3 P. M.—Dr. W. Parker in consultation. Pulse 145; soft, and without force. Respiration 35, and labored. Our opinions concurred in, and the following determined upon, to alternate with the foregoing powders:

R.—Pulv. Doveri, - - - grs. x.
Sulph. Quinia, - - - gr. j.
P. Gm. Camph., - - - gr. ij. M.

Diet, beef tea, wine whey, &c.

Monday, 7th.—In consultation; condition the same; no sleep; merely dosing; position supine; almost constant moving of the limbs.

9 A. M.—Pulse irregular—147, 154, and 145; respiration 34. Tongue dry; tip red; buff-colored posterior; mottled. She passed about two pints of urine at five and eight P. M.; she has had about six hours sleep during the day, but does not feel at all refreshed thereby. Skin burning; palms and feet moist; lochia normal; examined; no pus. No pain could be discovered over the abdomen, uterus, and none complained of in any part of the body.

The child nurses well, and seems satisfied, although there is not a fullness of the breasts. In order to be certain of its presence, I have from its advent ordered the pump to be applied, and invariably found it. The tightness continues in the breasts, but is invariably relieved by the mustard. The inspiratory and expiratory murmurs are normal.

3 P. M.—Condition about the same.

9 P. M.—Pulse 152; no volume; respiration 30; tongue rather dry; red in centre; white coat on sides, extending near to the tip; surface of the body not so pungent; slight moisture; her headache has nearly disappeared, and the lochia quite normal; she has passed about half a pint of urine; color quite normal; her appetite, which up to this time had been quite good, has considerably diminished; no pain, but feels that tightness across her chest which she describes as a drawing of the breasts to an approximation, it being simply uncomfortable; thinks she would be and feel as well as ever she

did if it was not for the intense internal heat or burning sensation, which nothing seems to allay, and from which she only finds temporary relief by the use of the mindeneri mixture.

She has shown considerable nervous excitement during the afternoon; she was ordered some Hoffman's anodyne, to be given in the mindeneri; her bowels not having been moved since yesterday afternoon, she was advised to take an aperient dose of the effervescing citrate of magnesia.

Tuesday, 8 o'clock A. M.—Pulse 138; a little more volume; respiration 24. Fever less; her face, which had continued flushed all over up to this period, is pale and somewhat sallow.

Her bowels responded to the medicine; her discharge being quite dark, very foetid, and watery. In order to obtain some urine for examination, I passed a well-cleaned catheter, and drew off about a pint, which, upon examination, was found to be quite normal. Her tongue is cleaning off, and her sleep has for the first time refreshed her.

10½ P. M.—Pulse 153; again soft; respiration 28; bowels moved again; the heat and moisture of the surface about the same; chest continues to annoy her; has taken some beef-tea; her headache has returned, and she has a slight hacking cough; examined the chest, but nothing abnormal discovered; her mouth and throat seem to secrete a thick, gummy mucus, which is very tenacious, and causes her quite an effort to dislodge it; her tongue is quite moist and clean. Immediately after taking her last powder, she drank some warm tea, which caused her to vomit. Ordered the powders to be continued every two hours, and alternate them again with the pills, giving the mixture occasionally.

Wednesday, 2 o'clock A. M., 9th.—Pulse 148; respiration 27; tongue the same as at last visit; surface also; urinated since our last visit about one pint; countenance not quite so anxious as at 10 P. M.; no pain; voice much stronger; no tremor; diminution of the secretion of milk; she seems inclined to sleep.

Wednesday, 9 o'clock A. M.—Pulse 133; firmer; respiration 23; tongue rather moist; fever less; passed two pints of urine; lighter color; has taken some beef-tea, jelly, ice-cream, and wine whey; voice firmer; countenance normal; eyes quite clear, and shows considerable animation in conversation; free from pain.

10 o'clock P. M.—Pulse 138; respiration 28; appetite improving; the acceleration of the pulse may be due to the excitement and exhaustion caused by her sitting up in a chair while her bed was being

made; this was not done by our order or suggestion; continued treatment. Warned not to repeat bed-making.

Thursday, 10th, 9 A. M.—Pulse 132; considerable volume, and some force; respiration 26; tongue clean and moist; surface moist; bowels have moved; fæces quite natural; passed some urine during the night. Give same medicines, but at intervals of four hours.

9 P. M.—Pulse 140; respiration 27; bowels moved three times, and quite watery, and of the color of Dover's powder, and has voided all of *three quarts of urine*, at intervals; takes sparingly of nourishment, and for the first time complains of slight pains in the bowels; thinks it is wind; feels it rumbling about; no swelling, fullness, or tympanitis.

Friday, 11th, 10 A. M.—Pulse 140; lost its tone; respiration 27 to 34; tongue not so moist; bowels moved twice during the night; she was very restless; wants to sleep, but only dozes; complains of the want of air; it seems to her as though she could not breathe, and is very apprehensive of death. Surface hot; extremities also.

5 o'clock P. M.—Pulse 144; respiration 35; slight pain on heavy pressure in right hypochondria; ordered calomel, grs. ij., opium, gr. j., every hour, until my next visit.

9 o'clock P. M.—Pulse 142; respiration 28; pain relieved; bowels moved three times; tongue nearly normal. Take quinine, grs. iij., with the last powders ordered.

Saturday, 12th, 10 o'clock.—Pulse 133; more volume and firmness; respiration 26; slept but little; raises occasionally that same kind of mucus; skin moist; bowels moved at five and ten A. M.; color light brown; not very offensive; passed her urine when her bowels moved, and don't know the quantity, &c.; lochia very light, and nearly gone; milk entirely suppressed; appetite not very good; intense thirst; trifling pain in the right hypochondriac region, but it was transient; countenance anxious; sighs almost constantly; *tongue quite normal*. Continue the same treatment.

10 P. M.—Pulse 128; respiration 28; marked improvement in various ways; being more cheerful countenance, less anxious; has ceased sighing; tongue normal; no pain; takes and enjoys her food. R.—Sol. sulph. morphia, Majendi, gtt. x.: To be taken as soon as procured; continue calomel, quinine, and opium.

Sunday, 13th, 11 o'clock A. M.—Pulse 134; respiration 28; tongue slazy down the centre; bowels moved once; very dark and foetid. This is the twelfth day since her confinement, and this morning we find her chest covered with vesiculous eruption, extending up as high

as the clavicle, down each side beyond the breasts, to about the eighth rib, being thickest on and between the mammæ; some of the vesicles were by measurement three-eighths and five-eighths of an inch in diameter, others as fine as the thirty-second of an inch, all filled; little red, inflamed spots, upon which subsequently were developed vesicles of like appearance, were scattered all over the chest, and one bullæ marked the ball of each finger, well filled, and about the size of a three-cent piece; the fluid was at first quite transparent; rounded in form, with a very narrow but bright-red areola; some of the vesicles were filled with a liquid of a most beautiful pearl color, and resembled dew-drops on a blade of grass in the morning, just as the early rays of the sun reach them; omit the calomel.

6 o'clock, P. M.—Pulse 145; respiration 32; her bowels have moved three times since 11 o'clock A. M.; very foetid, watery; tongue slazy; eruption on it and lips; no difficulty in deglutition; passed some high-colored urine; thirst not so intense; complains of feeling much exhausted; sighing returned; is quite anxious; the bullæ rapidly increasing in size. Urine alkaline, and filled with the triple phosphates. R.—Sulph. quinia in sol., grs. iij., every three hours, with as much Jamaica rum, wine, champagne, as she can bear.

12 o'clock.—Pulse 150; respiration 40; sinking.

Monday, 14th, 10½ A. M.—Pulse 160; respiration 54. Bowels moved twice; discharge very offensive and dark; urine in quantity, but highly colored; eruption extending down upon the epigastrium, increasing in diameter; some have burst, leaving a very bright-red spot; the cuticle somewhat shriveled, and quite dark, and very thin; many of them remain quite as fine as at their first appearance; some of them now contain dark, grumous fluid, whilst a large majority contain a cream-colored one. Tongue and throat covered with the eruption; she is in a constant tremor from head to foot; continue the nervines and stimulants.

5 o'clock, P. M.—Pulse 153; respiration 45; bowels moved; less offensive, watery; voice tremulous; eruption darkening on the fingers; countenance Hippocratic.

We were called at about 5½ o'clock, on Wednesday morning; I arrived in time to see her expire, which she did with comparative ease. Dr. Isaacs came shortly after I left, when, as I am informed, there could not be discovered the slightest trace of the eruption.

This was the last call ever made by our much lamented and respected friend, Dr. Isaacs.

The very sudden and alarming change in my patient's condition,

without any appreciable cause, led to my promptly calling for counsel. If we commence on the third day, we find a pulse of 100, and a slight restlessness preceding it on the night before; on the fourth day, a pulse of 145, and respiration 30, her sleep not refreshing her in the least, and other symptoms indicative of or accompaniments of fever; this fever, continuing with slight exacerbations until the advent of the eruption, without the slightest trace of the cause, except a slight pain in the right hypochondriac region, a sense of constriction across the chest, readily relieved by simple cataplasms and a movement of the bowels three or four times during twenty-four, and six times during the forty-eight hours immediately preceding her death.

Was it an inflammatory disease? The pulse was one of irritation, and the general character of the fever was asthenic; so likewise was the eruption asthenic in type.

Was it a disease, then, of irritation; and if so, where was it located?

I am inclined to the belief that it was not true pus-poisoning, but that plasma or exudate, thrown out previous to the formation of pus, was taken up in the circulation, and being catalytic in its operation, created a condition of irritation which subsequently developed itself in the eruption, and had so attacked the nervous system, as to exhaust it, thereby rendering nature unable to rally after the crisis of the eruption.

QUARTERLY REPORTS ON MEDICAL PROGRESS.

REPORT ON OBSTETRICS.

By T. GAILLARD THOMAS, M.D.

1. *Laceration of the Perineum, with Destruction of the Recto-Vaginal Septum—Operation, and Result.* By C. C. F. GAY, M.D. (Buffalo Medical and Surgical Journal.)
2. *Case of Puerperal Convulsions treated with Chloroform.* By ALFRED WHARTON, M.D., St. Paul, Ma.
3. *A Case of Rupture of the Uterus.* By E. L. HOLMES, M.D., of Chicago. (Chicago Medical Journal.)
4. *Abdominal Extra-Uterine Pregnancy.* By Dr. AUBINAIS. (Gazette Médicale, No. 44.)
5. *Osteomalacia.* By Dr. C. C. T. LITZMANN. Translated by Dr. J. Mathews Duncan. (Dublin Hospital Gazette.)

1. Dr. C. C. F. Gay, of Buffalo, N. Y., relates a case of ruptured perineum in a lady 31 years of age, of 2½ years' standing. The

symptoms accompanying the lesion were inability to control the contents of the rectum, and frequent copious fluid dejections. The laceration involved the sphincter and recto-vaginal septum. The operation of Dr. Marion Sims was resorted to; it lasted one hour and a quarter, and after it the wound was dressed with water dressings, while opium was used with freedom. The operation was performed on the 16th November, and on the 28th December the patient was well enough to ride out, the parts being perfectly restored to their normal state.

2. The woman was a primipara; had had six convulsive seizures; pulse 110—feeble; os contracted. Chloroform at once checked the attacks; and being kept up for five hours, was discontinued, without return. Patient was safely delivered of a still child.

3. The patient, an Irish woman, *æt.* 32, was in fourth confinement. Liquor amnii discharged fourteen hours, but uterine efforts had been strong only for from two to four hours. Previous health good; former labors difficult and slow. The os was dilated, head presenting; pains moderate, occurring at intervals of ten or fifteen minutes. At end of six hours from this time, os fully dilated, and head passed superior strait. The Dr. left the room for a few moments, returned, and found the patient dying. With a pain, she had shrieked, fainted, and labor had ceased. Symptoms: great abdominal pain; thirst; cold extremities; hurried breathing; pulse scarcely perceptible. Brandy was administered, and version performed. The rupture was found (upon introduction of hand) to be at fundus about $4\frac{1}{2}$ inches long. Death occurred three minutes after delivery.

4. The patient, aged 34 years, took, at the time when she expected her periods, for two days in succession, 30 grammes of castor oil; the second dose produced great retching, after which she experienced great pain in the region of the left ovary. A flow of blood through the genital parts took place at the same time, and was considered as the menses.

Her health continued variable.

A retention of urine caused the abdomen to undergo examination, and a tumor, which increased daily, was discovered in the left iliac region, where the patient felt a dull pain. This, and the absence of the menstrual discharge, made extra-uterine pregnancy probable.

Six months after the beginning of the symptoms, the tumor attained the size of a child's head which had come to its full time, and the touch enabled us to ascertain that the tumor was separate from the uterus, and that this organ contained nothing. Auscultation discov-

ered a blowing sound; but neither active motion nor sound of the heart of the fœtus was discovered.

A month after, the woman was attacked with pains resembling those of childbirth; they intermitted in the same manner; the vaginal touch, in revealing the vacuity of the uterus, discovered in the rear, and a little higher, a hard tumor, which seemed ossified, and seated in the highest part of the curve of the sacrum.

The situation of the patient was considered too critical to practice gastrotomy; she died during the day.

Autopsy.—The abdominal walls being incised, the tumor was displayed; it was a cyst as large as the head of an adult, filled all the left half of the abdominal cavity, and ascended to the epigastric region. It was opened, and about 100 grammes of liquid escaped, and a fœtus doubled on itself appeared.

The cyst was independent of the uterus, above which it was situated.

The placenta occupied the right and upper part, and the fœtus the left.

The walls of the cyst were formed in front by the corresponding part of the parietal peritoneum, even to the os uteri, and at the back also by the peritoneum, to the recto-uterine *cul-de-sac*.

The lateral walls were formed on two sides, by the anterior and posterior faces of the broad ligament.

The vesico-uterine and recto-uterine *culs-de-sac* formed the inferior part of the cyst, the superior side of the uterus forming the base.

This base was continuous at the right and left with the trunks, which ascend vertically in front, to the level of the placental region of the cyst.

As to the superior and right side of the cyst, which corresponds with the insertion of the placenta, it is more complex; it is run through by a portion of intestine, flattened like a ribbon and adhering, which extends obliquely from the superior, anterior, and left part of the cyst, to its inferior, posterior, and right part. It is the sigmoid flexure of the colon, of which the development of the cyst has determined the passage.

After having removed the mesocolon and the sigmoid flexure, a fibrous membrane peculiar to the cyst was found, the thickness of which was considerable in all the region of the placenta.

This covering could not be separated from the placenta without disclosing the substance of that organ. It formed the external wall of numerous openings, which, after creeping through the space of some

centimetres, was plunged in the thickness of the placenta; the umbilical cord reached the placenta by the anterior side.

One membrane only was found at the foetal front of the placenta; it formed alone the chorion and amnion, and was, with the peculiar covering which we have described, on the external face of the placenta.

The uterus had scarcely more volume than when in a state of vacuity.

The external orifice of the neck admitted the extremity of the finger.

The cavity of the body, sufficiently developed, presented a very thick mucous membrane.

The ovaries were outside of the cyst.

5. The following brief extract from Braun's Midwifery sufficiently indicates the importance of the degeneration known as Osteomalacia, in its obstetrical relations:

(" *Osteomalacia*, in its various degrees, usually results in pelvic deformities, which are designated as the *triangular heart-shaped pelvis*, or *cocked-hat pelvis*; and in its severest form, as the "*knave of clubs*" pelvis. In all osteomalacious pelvises, the angles of the triangle fall in the two sacro-iliac and the pubic symphyses; the horizontal *rami* of the pubic bone, instead of being curved outward, are straightened or even curved inward, so that they approach one another for a distance of several lines, perhaps inches, thus producing a beak-shaped protrusion of the pubis and the *mons veneris*. At the superior strait the promontory of the sacrum and the *tubercula ilio-pubica* approach each other to such an extent that the cords of the arcs and the transverse diameter measure very few inches, or even lines, while the conjugate diameter is, if at all, but very slightly diminished. Both iliac bones rise abruptly, and are very concave, as though they had been rolled up. The anterior pelvic wall is usually higher than the posterior. The sacrum is cracked transversely, and very concave; the coccyx bent forward, approaching close to the promontory. In consequence of the great inward prominence of the ischiatic tuberosities, the inferior strait assumes an hour-glass shape. The pubic arch forms an acute angle, so narrow, that at times the finger cannot be forced through it in order to make an examination. The posterior half of the inferior strait, while it is, to be sure, generally somewhat broader than the anterior, is still decidedly contracted. The bones are soft, and by the employment of a little force in introducing the hand, the pelvic dimensions may be slightly increased, as has been observed by Barlow, Von Ritgen, Feist, Lange, Von Siebold, and others.

"The condition of the vertebral column in osteomalacia is charac-

terized by an arcuate curvature of the spine, with elevation of the pelvis from the sacrum and the ischial tuberosities.")

"Osteomalacia, anatomically considered, depends upon a softening of the osseous tissue advancing from the centre towards the circumference—an osteoporosis, or eccentric atrophy."—CURLING.

"The reticulated frame-work of the spongy substance becomes thinner and more delicate, wastes more and more; the medullary spaces are enlarged and run into one another, to form larger cavities. The compact cortical substance is more and more opened out by the disappearance of the bony tissue; its vascular and medullary canals become wider, and from the solid cortex is formed a spongy texture, with larger and smaller spaces. The cavities produced in this way become filled with a peculiar marrow, which is probably the result of a transformation of the dissolving osseous tissue itself."—VIRCHOW.

"The attenuation of the bony structure attains different degrees; in the higher, there remains only a thin external cortical layer; indeed, even this itself disappears to a greater or less extent, and the bone in a certain sense may be reduced to periosteum and marrow. The dissolution always begins in the centre of the bone; in short bones, in the interior of the spongy substance; in flat bones, in the diploe; in long bones, in the spongy substance surrounding the medullary canal, and the change advances outward towards the cortex. In the flat bones, the inner spongy layer increases in bulk at the expense of the thinning layers of the bony cortex. Here and there the thinned external bony layer and the adjacent periosteum are pushed outward in a swelling by the exuberant spongy tissue; occasionally gaps appear in the outer layer of the bone, and the spongy substance of the diploe is laid bare in spots; frequently the rarefied diploe at last completely disappears, and the cortical layers of the bone are brought into contact with one another, and cohere. The highest degree of the atrophy is observed in the long hollow bones of the extremities. By the progressive production of medullary spaces, the medullary canal is more and more enlarged, and a spongy, loose cortical layer, often thinned even to transparency, incloses a large-celled spongy tissue, or even naked medullary substance. Now and then, there are observed indentations of the thin bony cortex, which project into the medullary cavity, and sometimes the medulla bulges out like a hernia through holes in the outer cortex. In the extremest cases, the bones are changed into fleshy cords, on whose surface there are seen still adhering in some places, thin, small, bony layers under the periosteum; or

every trace of bony tissue may have disappeared, and only membranous sheaths of periosteum filled with medulla are to be found.

"In the tubular bones the process always begins first in the denser and more compact shaft, or middle portion, and extends thence to the more spongy ends. The lower extremities are, as a rule, more violently affected than the upper; the parts of the limbs nearest the trunk are usually found diseased in a higher degree than the more remote; in the spinal column, the affection for the most part diminishes in intensity from below upward. The bones least implicated are always those of the cranium and face. The teeth remain constantly exempt, except that in consequence of softening of the alveolar border, they sometimes become loose and fall out. The cartilages also maintain generally their normal condition; only in some few cases they are found to have become thinner, or more easily separable, than is natural from the underlying bone.

"The changes which the dissolving osseous tissue undergoes in its transformation into medulla have hitherto been but imperfectly made out. In the diseased parts the bone-corpuscles are found enlarged and irregularly rounded, their canaliculi shortened and widened, and their interior filled with fat. Most observers find in this an indication that the softening of the tissues proceeds from the bone-corpuscles. Dalrymple alone is of opinion that the softening begins in the contiguity of the bone-corpuscles, (in the medullary spaces and canals,) and that the changes in the dimension and form of the bone-corpuscles are secondary, and produced by absorption of the dissolved tissue in the neighborhood. The dissolving osseous tissue appears almost, as a rule, to lose first its calcareous salts, and thereby to be softened; often, perhaps, continuing for a considerable time in this condition, before changing into medulla, at the same time partially retaining its form; more frequently experiencing a transformation into a sort of areolar tissue, which by-and-by becomes a fibrous connective tissue."—ROKITANSKY, WEBER, LAMBI.

"The new marrow which fills the enlarged hollow spaces exhibits very various characters, which depend partly upon the degree and duration of the morbid process, and partly also upon the nature of the etiological influences. The difference is observed not only in different bones of the same individual, but also in different parts of the same bone. Often it is mixed up with the remains of the osseous tissue, which has advanced more or less in the softening process. In consistence, the marrow is sometimes quite fluid, almost serous; often it forms a viscid, oily, half-fluid, honey-like or jelly-like mass, or a

soft pulp; not rarely it may be called fleshy, or compared in consistence with the parenchyma of the liver. The color of the medulla is chiefly modified by the blood and fat contained in it; there are all intermediate shades, from the palest yellow or yellow gray, to the darkest red, brown red or black red. In the beginning of the disease it is always very rich in blood, and of a dark blue-red or red-brown color. The blood is partly contained in the dilated vessels, and partly is extravasated. By the microscope may be recognized in the mass both abundant unchanged blood-corpuscles, and abundant groups of brown-red pigment molecules. Not unfrequently considerable clots of extravasated blood, advanced to different stages of metamorphosis, are found mixed with the marrow. The progress of the hyperæmia is, as a rule, indicated by a copious production of round granular cells, some having one, some having more than one nucleus. In the same situations are occasionally found small, simple and laminated amyloid corpuscles, (Rokitansky;) rarely and exceptionally single caudate cells, (Dalyrmpie.) With the abatement of the hyperæmia, the production of new cells diminishes, the elementary structures generally undergo fatty degeneration and break up, the marrow loses color, becoming clearer and yellower, and in the extremest cases the bone seems, as it were, gradually to change into fat.

“Chemical analysis of the diseased bones must of course yield results varying according to the stage of the disease, the degree of destruction, and the character of the etiological influences. Speaking generally, the results hitherto gained in this way are of small value. As it is the rule, that first and chiefly the mineral constituents of the bones are removed, so we find the quantity of these almost always diminished; sometimes the carbonate, sometimes the phosphate of lime appears to be resorbed in greater quantity. The chemical composition of the cartilage of bone shows no change. With the advance of the disease, however, more and more of this disappears, the bone being gradually replaced by medulla. By boiling, gluten is sometimes found in the organic substratum of such bones; but in bones very much destroyed, no substance resembling gluten or chondrin can be any longer discovered. The fluids of the medulla have often an acid reaction, but this is not constant. C. Schmidt, in his case, found that the fluid contained in the centre of the hollow bones had an acid reaction, and on boiling did not coagulate in the slightest. By chemical investigation, he discovered that besides excess of phosphoric acid, there was also lactic fluid, in combination with lime, in the contained fluid. With this coincides a later observation by O. Weber.

Virchow, on the contrary, found in a case of puerperal osteomalacia, the soft jelly which filled the interior of the bones, to be, in fresh sections, of strong alkaline reaction, and to contain a substance distinguishable from ordinary solutions of albumen by the precipitate, which acetic and *in minimo* produced at a low temperature, and by the solubility of the precipitate produced at a high temperature by nitric acid, in the acetic acid solution. On one hand it had relations to casein, and on the other it showed much resemblance to a substance which Bence Jones believed he had demonstrated in the urine, in the case of Macintyre, to be a hydrate of deutoxide of albumen. Unfortunately, Virchow did not examine his patient's urine. The urine seems to be the vehicle by which, in this disease, the dissolved osseous substance is removed from the body. In several cases where attention was paid to its condition, it was found remarkably rich in phosphate or carbonate of lime; on standing, it deposited a white chalk-like sediment, which in one case became dissolved with effervescence, on the addition of an acid. Sometimes it was in the intervals of freedom from pain, sometimes during the paroxysms of pain themselves, that the urine chiefly exhibited this condition. Frequently gravel and calculi were evacuated with the urine, or found in the kidneys after death.

“The affected bones are distinguished, particularly throughout the first stages of the disease, through their abundant quantity of blood. In the commencement, the volume, especially of the flat bones, is found to be somewhat increased. Later, in consequence of interstitial absorption, the volume generally diminishes more and more, because a part of the softening tissue is dissolved and removed without any compensating addition being made. The diminution of bulk is most easily observed in those bones which are subjected to strong pressure, particularly the vertebræ, which have the appearance of being more or less compressed or distorted. The bones of the lower extremity, after long duration of the disease, and even although they themselves continue unaffected by the disease, are generally contracted in bulk through concentric atrophy in consequence of continued disuse. The weight of the diseased bones is determined not only by the greater or less loss of bony substance, but also by the fluid contents. In the fresh state they are frequently heavier; when dried, generally lighter than normal; often, however, particularly when very rich in fat, they are also, even when fresh, so light as to float on water.

“As the disease advances in the bones, their power of resistance is more and more lost, so that under their ordinary burden, they yield,

bend, or become angulated or break. In the higher degrees they may without difficulty be cut with a knife, even without grating. The diminished power of resistance depends partly upon the extent to which the firm calcareous bone tissue has disappeared, and been replaced by a soft limeless structure, and partly upon the greater or less infiltration of the tissues. So long as an osteoporotic bone possesses even an attenuated scaffolding of bony spiculæ and fibres, or a cortex through a thin one of compact bone tissue, it will bend at an acute angle, or break under the influence of even slight forces. If the lamellæ and spiculæ of bone substance are, however, very thin, the bone, if highly infiltrated, is to a certain degree flexible, and breaks only under increased loading. Drying always renders the bones more brittle and fragile. Several days of immersion in water restores to the dried bones their former flexibility.”—PLA——.

The more the connection of the parts of the frame-work of the structure is interrupted, and instead of continuous bony lamellæ or an inter-dependent network of bone-fibres, there remain only isolated fragments of bone, held together by a soft, limeless texture, a sort of connective tissue or marrow; or should even every trace of firm bone-tissue have disappeared, and the bone be reduced to periosteum and marrow, the greater naturally becomes its flexibility. Such bones have lost all their elasticity, and may be bent and kneaded like wax; indeed, in Bevan's case, they were called “as limber as a rag.” Still, there are not yet sufficient grounds to justify the adoption, with Kilian, of two different forms of the disease—an osteomalacia fragilis, and an osteomalacia cerea—corresponding to the two different degrees or kinds of diminished power of resistance in the diseased bones. Not only do the two extremes, having no distinct limits, as we have seen, pass into each other through intermediate forms, but they may also present themselves either simultaneously or successively, in the same individual, or alternate with one another, according to the greater or less infiltration of the morbid tissues. In individual cases, indeed, sometimes the one and sometimes the other form may predominate. There are cases recorded where patients have suffered seventy fractures or more, one after the other. The ribs, the clavicles, the bones of the extremities, and the branches of the pubic bone, seem to be especially liable to be broken. The fractures are sometimes complete, sometimes incomplete. The several bones remain often ununited, or the union takes place incompletely; in other cases, they unite in the usual way by the formation of a callus, which sometimes after a longer,

sometimes a shorter period, becomes ossified, and in the end may even attain a greater solidity than the neighboring bones. In the case of Goodwin, it was believed in the lifetime of the patient that the bones of the arm were broken; but investigation of the dead body showed that the indications of fracture were produced by a softening, which, though circumscribed, penetrated through the whole thickness of the bone, with complete destruction of the compact vortex. The supposed fractures had been similarly produced without the application of violence from without, after acute pains had continued in the parts for a longer or shorter time; several times was an apparent re-union followed by a recurrence of separation, with reappearance of the pains.

“In recent times there has been an ever-increasing tendency to regard osteomalacia, from an anatomical point of view, as a chronic inflammatory process in bone; a periostitis, (H. Meyer;) a parenchymatous ostitis, or a degenerative ostitis, (Virchow.) It remains for future inquirers to pursue the investigation of the forms of this process in their individuality, for it evidently does not exhibit merely graduated differences, and particularly to mark out exactly the different etiological influences and their modes of action, and to determine the power they exert over the progress of the disease.”

REPORT ON THE THEORY AND PRACTICE OF MEDICINE.

BY MARK BLUMENTHAL, M.D.

1. *Causation of Typhoid Fever.* By M. SIMON. (Lancet, January, 1862.)
2. *HILL on Pulmonary Consumption.* (British and Foreign Medico-Chirurgical Review, 1862.)
3. *Aphonia in Tubercles of the Lungs.* By Prof. MANDL. (Dublin Quarterly Journal, February, 1862.)
4. *PIORRY on the Treatment of Phthisis Pulmonalis.* (Boston Medical and Surgical Journal, January 23, 1862.)
5. *Quinine in the Dropsy of Scarlatina.* By Dr. HAMBURGER. (Gazette des Hôpitaux.)
6. *On Diphtheritic Paralysis.* By M. ROGER. (London Medical Times, January 4, 1862.)
7. *Amputation of Tonsils in Diphtheria.* By M. PAILLOT.
8. *Traitement préventif du Croup par le Tannage du Pharynx.* Par Mons. LOISEAU. (Journ. Méd. et Chir., Artic. 61, 32.)
9. *Notice sur l'Angine Couenneuse.* Par M. le Docteur BOTTE. (Gaz. Méd., November 2, 1862.)
10. *Diabète Sucré.* Par Mons. RIGODIN. (Gaz. Méd., November 2, 1862.)

11. *Cider in Diabetes.* (Berkshire Medical Journal.)
12. *De la Rage, considérée au Point de Vue de l'Hygiène Publique, et de la Police Sanitaire.* (Arch. Gén., December, 1861.)
13. *On the Bad Effects of Marriages amongst near Relations.* By Prof. DUVAY. (Edinburgh Medical Journal.)

1. In the last printed report to the Privy Council, (April, 1861,) M. Simon thus expresses himself strongly in favor of the essentially contagious character of this disease, and its specific power of infection: "Since I last reported generally on the subject of Typhoid Fever, (1858,) an addition has been made to the literature of that disease, by the publication in the *Lancet* (July, 1859, and March, 1860,) of a series of papers by Dr. William Budd, of Bristol. Dr. Budd's opinions as regards the character of typhoid fever are as follows: That the fever is essentially contagious; that the living human body is the soil in which the specific poison breeds and multiplies; that all the emanations from the sick are infectious; that by far the most virulent part of the specific poison by which the contagion takes effect is cast off by the diseased intestines of the fever patient; that the *characteristic affection* of the bowels in the disease is in reality the specific eruption of a contagious fever; that the sewers and other places into which all this virus passes are the principal channels through which the fever is propagated; that they propagate it *solely in consequence of being the channels for the diffusion of this* poison; that it is no more the offspring of common sewerage, than mildew is the actual offspring of damp and decay; and that by placing two ounces of caustic solution of chloride of zinc in the night stool, on each occasion before it is used by the fever patient, the intestinal discharges may be entirely deprived of their contagious powers."

To anticipate some arguments which might be urged against parts of this doctrine, Dr. Budd observes, that "typhoid fever scarcely ever reattacks a person who has once suffered it; and that like malignant cholera, dysentery, yellow fever, and others that might be named, this is one of the great group of diseases which infect the ground."

"The facts which Dr. Budd adduces from his own experience and from that of other observers are, in my opinion, sufficient to prove that the contagion of typhoid fever is importable by persons who have the disease. Indeed, on this point Dr. Budd's history of the North Lawton fever and its offshoots (*Lancet*, July 9,) is more conclusive than anything previously known to me. And his arguments are also, I think, cogent to this general effect, that specially the bowel discharges of the disease are means (yet not therefore necessarily the

sole means) by which a patient, whether migrating or stationary, can be instrumental in spreading the infection of typhoid fever. Provisionally these conclusions must be acted upon in their present unqualified form; but doubtless it is of practical importance to learn, as exactly as possible, whether it is in all states and under all circumstances, or only in certain states and under certain circumstances, that the bowel discharges of typhoid fever can effect what is here imputed to them. Typhoid fever seems to be in its causes, as in its nature, very intimately related to other diarrhoeal affections."

The reader will perhaps remember, that during the prevalence of cholera in Germany,* Dr. Pettenkoffer, of Munich, and Professor Thiersch, at Erlangen, made some exceedingly interesting experiments and researches, with a view to determine the infectious element of the disease. Although their labors and observations were carried on entirely independent of each other, they arrived at nearly the same conclusion, namely: that cholera could be, and actually had been, conveyed from place to place, by means of the decomposing intestinal evacuations from cholera patients. Prof. Thiersch went even farther, and has been led to believe that the decomposing evacuations of diarrhoea patients may, during the prevalence of cholera, give rise to the disease when deposited and accumulated in cesspools, or in the closets of houses which are not cleanly kept, be it from carelessness or from imperfect sewerage.

2. The mystery which has so long enshrouded, and which still beclouds the primary causation of phthisis pulmonum, as well as the appalling frequency of the disease, and its non-amenability to our remedial means, excepting perhaps under the most favorable and special circumstances, all tend to make the subject of consumption one of unexceeded interest and importance to the physician, as well as to all humanity.

Many remedies—too many, indeed—have from time to time been lauded to the skies, only to sink into merited disrepute soon thereafter; until many, both in and out of the profession, have arrived at the conclusion that it is vain to look or hope for a remedy in this disease.

Still, we have within the last 15 years half way believed that a remedy had been found in cod-liver oil; and although this hope has rather lost than gained since five years, we yet, now and then, find facts brought before us that must arrest our attention, and encourage us once more to have faith and perseverance.

* In 1854.

a. Among those who have had large opportunities for correct observation, is Dr. Hill, and he gives us the following hope-inspiring statistics. It is true they do not show cures, but only improvement—but even this is acceptable, under the circumstances.

The total number of cases treated was 174.

Of these, 103 took the cod-liver oil—71 did not.

Of the 103 who had oil, 64, or 62.13 per cent., improved.

Of the 71 who had no oil, 29, or 40.84 per cent., improved.

Of 83 males that took oil, 52 improved.

Of 20 females that took oil, 12 improved.

Of 47 males that had no oil, 16, or 34.05 per cent., improved.

Of 24 females that had no oil, 13, or 54.15 per cent., improved.

Patients treated with oil:

Of those in 1st stage, 75 per cent. improved.

“ 2d “ 80 “ “

“ 3d “ 41.66 “ “

Patients treated without oil:

Of those in the 1st stage, 50 per cent. improved.

“ 2d “ 50 “ “

“ 3d “ 36.2 “ “

As regards the importance of pulmonary hæmorrhage as an indication of the probable duration of the disease, Dr. Hill found that the cases unaccompanied by bleeding from the lungs are more acutely fatal than those which present that symptom. Thus, while the average duration of the former class was one year and eight months, that of the latter was two years and six months.

This is also, I believe, the experience of most practitioners, and tends in a measure to qualify the prognosis in a given case; so that, although the occurrence of repeated hæmorrhages is, in point of diagnosis, often of very great and evil-foreboding importance, it is, on the other hand, an indication of the comparative chronicity of the disease. On this last point our author says: “As regards the duration of a case, it is well known that the extreme limits are separated by a wide interval. That from which commences as an attack of pneumonia, and terminates in the pathological condition of ‘cheesy hepatization,’ may bring its victim to the grave within a very short period. Cases also of ‘acute tuberculosis,’ and those which are hastened to their end by any fatal inter-current attack, such as meningitis, may of course be of much shorter duration than ordinary cases, and therefore should be omitted, in endeavoring to ascertain the average duration of the latter class, of which the shortest that has come under my notice is that of

a lad aged 19, who, as far as could be ascertained, was in good health and quite free from cough four months before his death. One of the most protracted cases I have observed was that of thirty years."

The frequency of complications is shown by the following figures. In 220 cases, there was

Pneumothorax.....	in 6.
Laryngeal affection.....	" 17.
Fistula in ano.....	" 5.
Tuberc. meningitis.....	" 3.
Tuberc. peritonitis.....	" 2.
Tuberc. in intestin.....	" 5.
Albuminuria	" 3.
Disease of bones.....	" 3.
" supr. ren. capsules	" 1.

3. "In opposition to the ruling and apparently well-founded opinion, that the alteration of the voice in the course of tuberculosis of the lungs is due to a local disturbance, (catarrh. tub. of larynx,) Professor Mandl puts forward another view; he says these changes are not always the cause of the changes of voice, but that they may be looked upon as a functional disturbance of the recurrent nerve. Division of the recurrent nerve in animals gives rise to aphonia, difficulty of breathing, and closing of glottis; so he conceives that the aphonia in tuberculosis is caused by pressure of the infiltrated portion of lung and bronchial glands on this nerve. This aphonia accompanies tuberculosis of the left side seldomer than of the right. The recurrent nerve of left side, passing between the trachea and œsophagus, is more protected from pressure than on the right side. In children before the 4th year, the alteration in voice is very rare; not frequent before puberty, and more rare in women than in men. The first of these facts Mandl tries to unite with the statement of Lanzeti, that in young animals the section of the recurrent does not produce aphonia; its rare occurrence in females is explained by the similarity of the organ to that of infancy. After section of the nerve or its compression, fatty degeneration and atrophy of the internal muscles of the larynx occur. This Mandl ascertained on the dead body. By laryngeal inspection on the living, paleness of the mucous membrane and limited motion of the vocal cords have been observed.

4. In a recent communication to the French Academy of Medicine on the treatment of phthisis, M. Piorry presents the following summary of conclusions:

1. Pulmonary phthisis is a collection of numerous morbid phenomena, and not a morbid unit.

2. There does not exist, nor can there be, a special or specific remedy for it, to destroy a unit that has no existence.

3. That consequently, iodine, tr. of iodine, no more than chlorine, salt or tar, can be considered as anti-phthisical.

4. That it is necessary, in order to treat phthisical persons properly, to appreciate and specify the particular organic affections which they present, and to meet them with appropriate remedies.

5. That hygienic precautions, intelligently advised, may prevent the development of tubercle.

6. That by proceeding in this way, by combating the particular affections which occur together or succeed each other, we have a rational treatment of phthisis, which can show a fair number of perfect cures, and a very large number of palliated cases.

5. Dr. Hamburger has given this drug in 47 cases, and in 44 improvement took place at once, or in a very few days; in three cases only was there no change for better or worse. The effects observed were, a diminution of the febrile symptoms, and increase of the urinary secretion, which became more clear; absorption of effused fluid, even the resolution of abscesses already formed; return of appetite and strength.

The urine, nevertheless, continued to be albuminous for some time, but this was no obstacle to the progress of the convalescence.

According to the summary which Dr. H. gives of his cases, it was in the chronic form of scarlatinous dropsy that the action of quinine gives the best results, and is manifested with the greatest rapidity. In cases of this kind, improvement commences almost immediately after the first doses. At the commencement, so long as the acute period continues, the employment of the quinine may be deferred for a few days, unless the danger is imminent.

On many occasions, Dr. H. has seen the condition of the patient remain the same for many days, or to be gradually growing worse; the urine very dark, and the dropsy increasing. The quinine was then given boldly, and a happy result was the consequence. If a marked improvement is not manifested in three or four days, however, the remedy must be dropped; but even in this case it should not be regarded as entirely useless, for it seems to act upon the specific character of the disease. The dose to be given is from $\frac{1}{2}$ to 2 grs., twice daily, for children, and 3 or 4 grs. for adults.

During the use of the quinine, the diet should be carefully watch-

ed, great care being taken not to overtask the very irritable alimentary canal, by overloading it with food or drink.

6. Diphtheria has within the last few years so much infested our population in many portions of our country, and its causes, frequency, duration, complications, course and treatment are as yet so undefined in the minds of the profession generally, that all information that can be gathered from the experience of others is exceedingly welcome. It is in this conviction that we transcribe the following abstract from a paper by M. Roger, of Paris. He says:

"Of 210 cases of diphtheria at the Hôpital des Enfants, 31 were followed by paralytic symptoms. The proportion is probably greater, as several of the children were removed prior to the period at which consecutive paralysis usually occurs, and others died before that period arrived." M. Roger believes that the proportion of these cases is about a fourth or a third.

The contrast between the frequency of these secondary paralyses after diphtheria, and their scarcity after other diseases, is striking. Thus, in 1860, among 61 cases of angina simplex, 12 of typhoid fever, 33 of rubeola, 12 of scarlatina, 4 of variola, and 24 of pneumonia, not one instance of secondary paralysis occurred; and the experience of M. Blache coincided with this.

Of 40 cases of diphtheritic paralysis which came under the care of M. Roger, 21 were females and 17 males, and the most frequent ages at which the paralysis appeared was from four to six years.

In almost all cases the paralysis commenced at the pharynx and velum palati, as exhibited by the nasal twang and dysphagia. The establishment of a relationship between its occurrence and the gravity of the primary disease is not easy, although it would seem to be a proof of a greater amount of blood-poisoning. But in fact, *it is in the milder cases that the paralyses are found to be of the most frequent occurrence*; but this may be owing to the rapidity with which death usually occurs in diphtheria. As to the relationship of paralysis to albuminuria, often met with in diphtheria, M. Roger has not sufficiently examined the point beyond being able to state that albuminuria is at all events not an essential concomitant. The usual appearance of the paralysis is from the fourth to the eighth day, but sometimes dysphagia is observed from the beginning, while in others these secondary symptoms occur much later. Their mean duration is about a month. As a general rule, the prognosis is not unfavorable, although in exceptional cases death has resulted from paralysis of the respiratory muscles, or sudden suffocation. For treatment, M. Roger recommends

especially tonics, iron, sulphurous preparations, and the application of electricity.

7. A few years, ago M. Bouchut proposed the excision of the tonsils as a means of treating the early stages of diphtheria, regarding the disease as at first a local one, which may be destroyed *in situ*, but which, left to itself, would give rise to a secondary infection of the economy.

Several practitioners have followed out this recommendation with good success, and now M. Paillot communicates the particulars of three cases occurring during a severe epidemic which ravaged the commune of Noyers in 1860, and in which he performed the excision with successful results. The tonsils were covered with false membranes, as were in one of the cases the whole of the pharynx and velum, but on the extirpation of the tonsils the false membranes ceased to be reproduced.

8. M. Loiseau, of Montmartre, who has acquired a sort of celebrity in the subject of throat affections, still persists in considering (contrary to the conclusions of a committee appointed to investigate the subject) the local application of tannin to the fauces as a means of destroying the specificity or virulent principle of diphtheria, by arresting its action locally, and hindering its spreading to the larynx. "Twenty years' experience," he says, "authorizes me to adopt the following preventive method:" This method consists in gargling the throat as soon as the slightest uneasiness is felt, during epidemic periods, with a watery solution of tannin, say every quarter of an hour, occasionally swallowing a little, to be sure of reaching every part of the throat. Should this not produce the desired result, an alcoholic solution is employed, administered in tea-spoonful doses. If pain continues, one part of chloroform is added to ten parts of the alcoholic liquor and six to eight parts of tannin. M. Loiseau also employs an ethereal solution, and affirms that it is very rarely that prompt amelioration is not produced by this treatment, at least when the angina does not depend on an eruptive fever, such as variola or scarlatina.

9. Before leaving this subject, let me add the testimony of Dr. Botte on the beneficial effects of local applications in the form of cauterizations in diphtheria. The doctor has certainly met with most astonishing success, as shown by the following statements: Among 129 cases of diphtheria of similar nature and appearance treated by him, he was *not allowed* to cauterize the throat in 16. Of these 15 died. Of the 113 cauterized, only 7 died; 1 of scarlatina, 2 of anasarca after scarlatina, and 4 by the extension of the disease into the

larynx. The former three ought, perhaps, to be excluded from the statistics of the disease. Among 110 cases, therefore, there were only four in which the cauterizations have not destroyed the false membranes, or prevented their extension into the larynx.

M. Botte cauterizes not only the diphtheritic spots, but the whole posterior fauces, with a sponge dipped in a strong solution of nitrate of silver, and applied three to five times daily; continuing the applications until symptoms of resolution, such as partial detachment of membranes, expectoration, &c., occur.

The treatment here so highly lauded by M. Botte is certainly worthy of trial, both from its rationality and its facility of execution, and because it enables us to measure its effects by inspection. That the cauterizations are locally beneficial, can, indeed, hardly longer be open to doubt. Whether their usefulness is limited to the local phenomenon, or, by destroying the local affection, prevents its spreading and infecting the system with the peculiar poison, remains to be ascertained by further observation.

10. M. Rigodin, acting upon the experiments of Messrs. Dumas and Bernard, who have demonstrated that the presence of sugar in the animal economy is indispensable to the continuance of life, believes it rational to employ sugar in diabetes, inasmuch as patients suffering from the disease lose it in such enormous quantities. "In depriving them of sugar and feculæ we see them growing worse, for they have need thereof to supply the continual loss."

In accordance with these doctrines, M. Rigodin supports his diabetic patients upon a diet in which sugar forms an important element. At the same time he advises the use of Vichy water, so that his cases, in which there has been a remarkable amelioration, are not conclusive.

11. Drs. Miller and Holmes lately reported to the Berkshire Medical Society a case of diabetes in a man 72 years old, and of three years' standing, which was cured by sweet cider. Dr. F. Childs brought additional testimony to the cure of diabetis mell. by the use of cider.

12. Mons. Boudin read a paper before the French Academy of Medicine on this subject, summing up with the following conclusions:

1. The number of dogs in Europe may be estimated at more than twelve millions, and the price of their maintenance at more than half a million; and the number of persons that become victims of hydrophobia inoculation as several hundred.

2. In the vast majority of cases, the disease is propagated by wounds from the bite of mad animals; under some circumstances it ap-

pears to be equally transmissible by a simple licking of the skin, more or less abraded.

3. Among the innumerable papers published upon this subject, we have not met a single fact sufficient to constitute scientific proof of the existence of spontaneous hydrophobia.

4. Even if the spontaneous production of the disease could be demonstrated, its occurrence must be so extremely rare, as to be hardly deserving of notice in the establishment of rules of sanitary police.

5. The ancient hypothesis, renewed in latter times, that the disease is to be attributed, in the dog, to the non-gratification of the sexual instincts, is entirely untenable.

6. The influence attributed to temperature and moisture of the atmosphere upon the frequency of hydrophobia is contrary to facts.

7. The pretended contagious (epizootic) rabies described by authors are nothing more than multiplied cases of communicated rabies; and the word epizooty should be struck from the scientific vocabulary.

8. Our science possesses no positive knowledge regarding the limitation of the period of incubation in the human subject; and while it may last seven months in the dog, it lasts $14\frac{1}{2}$ in the horse.

9. There exists no sign truly pathognomonic of rabies in the dog. Hydrophobia, so called, seems to be entirely absent in the mad dog; the peculiar howl seems to be of much value in a diagnostic point of view.

10. Science possesses nothing certain concerning the nocuousness or innocuousness of the flesh of mad animals, as aliment, or of the milk of cows or goats bitten by enraged animals.

As regards measures of public hygiene and sanitary regulations:

1. Rabies has the effect of diminishing the number of dogs, and consequently the chances of its occurrences in man or beast.

2. It may manifest itself during the whole year, and the animals should be under surveillance at all seasons; consequently, they should never be allowed to go unmuzzled.

3. Experience having shown the frequency of wounds from muzzled dogs—20 times in 150—the manner and kind of muzzling should be prescribed by public authority.

4. Dogs bitten by animals either mad or suspected, if not at once killed, should be sequestered for a time at least equal to the maximum period of incubation.

It were very much to be wished that our public authorities were conversant with the above points, so that measures equal to the ends

proposed be taken. There is a horrid degree of recklessness exhibited in our city, and probably in the greater part of the country, in this regard. The most savage-looking animals are only too often allowed the fullest liberty, and it is only to be wondered at that the public is not oftener punished than is actually the case.

13. It has long been the impression among scientific men, strengthened not seldom to a moral conviction, that intermarriage among relatives is injurious to the race, and particularly pernicious to the direct offspring. But although the impression has existed, it had never been based upon scientifically ascertained facts and data, and consequently carried no scientific weight. And the attention of the physician and philanthropist is particularly drawn to the facts hereinafter stated, because the mind of the public in general is so averse to regard, much less to believe, in the unfortunate results of consanguineous alliances; on the contrary, they suppose that not only does it present no disadvantages, but that it is absolutely desirable, provided that the contracting parties are not subject to hereditary diseases, or better still, are endowed with superior mental or physical qualities; and only when the parties are affected with transmissible diseases, are these marriages hurtful, the intensity of the disease increasing not by simple addition, but by a sort of arithmetical or even geometrical progression. "Such, however, is not the language of facts, which show that in pure consanguinity, isolated from all circumstances of hereditary disease, resides, *ipso facto*, a principle of organic vitiation."

In support of this statement, Dr. Duvay relates a case of a family belonging to the South of France who had six children, two sons and four daughters; all six attained a pretty advanced age and all married; three married cousins-german—the other three married strangers. The annexed table arranges them in two categories, comparing the number of children each had with the number of children who died young.

1. Marriages between relations.	No. of Children.	Of which died young.
Miss M. A.,.....	11	11
Mr. A.....	8	6
Miss C.,.....	5	3
	24	20
2. Marriages with strangers.	No. of Children.	Of which died young.
Mr. V.,.....	6	2
Miss A.,.....	7	0
Miss L.,.....	6	1
	19	3

It should be remarked that the three members of this family who lost the most children were not more delicate than the others, as might have been supposed, had they been the two youngest of the family; they occupied the places, 1—3—6. The eleven children of M. A. all died of hydrocephalus at a very early age; one alone attained 14 years. The six children which Mr. A. lost also died very young; the survivors are delicate. Of the three children lost by Miss C., one died at the age of 15 days; a second, though delicate, attained the age of three years; the third died when 12 years old, of inflammation of the brain and its membranes.

A similar fact has been communicated to the author, of a merchant in good health, who in 1809 married his niece, a robust and healthy girl. Eight children were the fruit of the marriage; of these seven died before the age of four years, of convulsions or hydrocephalus; the only survivor is a daughter, now 33 years old, who is very delicate, and whom I have been attending during several years, with the view of moderating the severity of a psoriasis diffusa, which has existed from her earliest infancy, and the existence of which perhaps saved her from the fate of her brothers and sisters.

Congenital deaf-and-dumbness is one of the most frequent results of the marriage of relatives. Dr. Duvay has recently had six opportunities of noticing the coincidence: one of these is the following: A handsome, well-made woman called on me with her little boy three years old, who had been deaf and dumb from birth; she was afraid that a similar misfortune would affect another son, four months old, who was completely deaf.

In answer to my inquiries, she stated that none of her relatives had been deaf, but that she had married her uncle. In another family of eight, where the parents were cousins-german, five were either deaf from birth or became so afterwards, and the other three were subjects of various bodily and mental deformities.

Dr. Chazarain, from his connection for several years with the Deaf and Dumb Institution of Bordeaux, had peculiar advantages for investigating this point, the results of which he laid before the Faculty of Medicine of Montpellier in a thesis.

Out of 39 boys in the Institute deaf and dumb from birth, there were the off-

spring of relatives	6	
Among whom, one had	2	brothers deaf and dumb.
One	3	“ “

Total.....11

Of 27 girls, deaf and dumb from birth, 9 were the offspring of relatives. Of this number, 6 had among them 7 brothers or sisters affected with the same infirmity; making in all 16.

At present France possesses 29,512 deaf and dumb individuals. According to their distribution in the different localities, it appears that the greatest number is found in mountainous departments, where means of communication are difficult. The department of Ariège has the highest figure, 161 to 100,000 inhabitants. In this department the marriages among relatives are so frequent, that the priests have several times applied to the Faculty of Medicine of Montpellier to issue an authoritative reprehension of such unions.

Anomalies of organization and deformities are also the result of such intermarriages. Thus, there is at present in the Hôtel Dieu a patient with a peculiar deformity of both feet. On the left side the great-toe is united to the second; the third and fourth are united in the same way; the fifth is isolated. All the phalanges are perfect; the union being only by the soft parts. On the right side same as the left, except that the phalanges have partly disappeared. The parents of this man were first cousins.

Other cases are cited, but the most remarkable fact is, that such malformation may become endemic, as it were; thus it is stated to Prof. Duvay, by Dr. Polton, that sexdigitation affects an entire population, as seen and verified by him.

"There is in the department of the Isère a little village called Izeaux, isolated, lost, so to speak, in the middle of a little-cultivated, almost barren plain. The roads in this inhospitable district being bad, communication with a distance was formerly almost impracticable. The inhabitants of Izeaux, nearly abandoned to themselves, having little intercourse with the surrounding population, constantly contracted marriages among themselves, and therefore, frequently with their own relatives. About the end of last century, as the result of this state of things, there has been engendered and kept up a singular monstrosity, with which thirty-five or forty years ago almost the whole population was affected. In this village men and women had on their hands a sixth finger, and on their feet a sixth toe." In 1829, and again, 1836, when Dr. Polton observed this singular phenomenon, this deformity had in some of them become reduced to a rudimentary condition, and in others only a large tubercle, in the centre of which was a hard, osseous substance, and a species of nail, more or less formed, terminated this tubercle, which was fixed to the external lateral aspect of the trunk.

Since some years, however, the place having become less isolated, the roads better, and communication made easier, in short, intermarriage with strangers having occurred, the deformity has almost entirely disappeared from the village. In 1847, Prof. Duvay saw a gentleman, settled in Lyons, who, subject to this deformity, had married a lady in Lyons. They had four children, but all free from the deformity.

The Italian Campaign of 1859. Medico-Chirurgical Letters from General Head-Quarters. By Dr. A. BERTHERAND, Principal Medical Officer of the First Class, etc., etc. Translated for the AMERICAN MEDICAL MONTHLY.

LETTER II.

Alexandria—The Wounded of Montebello—The Division Hospital—Marengo—Vercelli—Novara—Magenta, and the Ambulance of San-Martino.

TO PROFESSOR FRISON:

My Dear Colleague—Since my first letter to our colleague and friend, Pécholier, (so abruptly brought to a close,) great events have succeeded each other with such rapidity that I should in vain demand of my memory, oppressed by so many exciting episodes, a history, in the slightest degree connected, of the last fortnight. Since, too, the telegraph and the official *Monitor* have long since transmitted to you the military bulletins of the army, I felicitate myself on being able to pass over, almost in silence, strategic details already known to you, and by no means familiar to my pen, that I may confine myself exclusively to the medico-chirurgical side of the campaign.

The iron road is encumbered with military trains, which interfere with each other in every possible way, and it takes us six mortal hours of cars to go from the *Marble City* to the *City of Straw*; for by this latter name do the natives call the formidable rampart, and the flat and insignificant *City of Alexandria*.

Along the approaches to its gates, the inundation, but just subsided, the trees felled and upturned in the *cheveaux de frise*, roads destroyed, bridges bastioned, cannons' mouths overtopping the shoulders of the redoubts, all announce the proximity of war.

Within the walls the different Corps of the Guard form successively under the eyes of the Emperor. Through the midst of this animated crowd, each hour increasing, there pass from time to time vehicles or litters, before which the tumult of voices is stilled, and heads are uncovered; respect, honor, to the wounded of *Voghara*!

Different arrivals from the battle-field of Montebello have already brought to Alexandria more wounded than the Division Hospital can hold. In order to supply this deficiency as far as possible, temporary branches have been established at *San-Martha*, *Santa-Chiara*, the *Seminary*, and the *National College*. But these places, for the most part unhealthy, and destitute of both furniture and assistants, possess neither pharmacy, kitchen, nor stores.

They are proceeding with energy in founding the first French hospital in the spacious buildings of the *San-Stephano* barracks, and our colleague, M. Cazalas, having the charge at Alexandria, as has M. Bondin at Genoa, of the general direction of the hospital arrangements, should bethink him of new resources for the wounded, the sick, and the convalescent.

Actuated by sentiments of extreme courtesy and good-fellowship, the Medical Inspector-in-Chief, Baron H. Larrey, has preferred leaving to our Piedmontese colleagues the care of directing the surgical treatment of the wounded French who are mingled in the wards of the Division Hospital with wounded Sardinians and Austrians—allies and enemies of the night before, conquerors and prisoners of yesterday, all to-day confounded in one and the same misfortune; equals in view of the indefeasible rights of suffering to the consolations of science and of charity. Beside the regular morning and evening visits of the surgeons in attendance, on which a great number of us made it our duty to attend, the wards have been made, the whole day long, the shrine of a devoted and incessant pilgrimage. MM. Lhonneur, Gaujot, Lecomte, and Jacquemin, of the General Head-Quarters, attend to the dressings at the Seminary. Surgeon-Major Delassus shares with the Medical Staff of the Second Division of the Guard the duties of Santa-Chiara, and another of the branch hospitals.

Several amputations have already been performed at the Sardinian Military Hospital, by the Division Surgeon, Cortese, and the young and skillful Professor of Pavia, M. Insani, whose patriotism has constrained him to leave the disquisitions of the amphitheatre for the labors of the ambulance. In the service of M. Cortese, an experienced and ingenious practitioner, we noticed curved splints of very thin tin, for the fixation of fractured limbs. To those designed for the lower extremities a sole is soldered so as to support the foot, and at the level of the heel a hole is left for the escape of pus in compound fractures.

Great lightness and malleability appeared to characterize these apparatus, and we have had a number of them put together, desirous of

experimenting upon their value as compared with the wire splints of Bonneh.

Among the most interesting injuries observed in the same establishment, I shall notice more particularly two balls imbedded in the frontal bone, with fracture of the vitreous lamella, and perforation of the *dura mater*. The conical form of the projectiles in this class of cases renders their extraction the more difficult, from the fact that the foreign body, having penetrated with its point—in virtue of the peculiar nature of its flight, to which I propose to return later—necessarily changes its direction in consequence of the resistance which it meets. It may happen then that instead of its base, some portion of its circumference presents externally. In other words, the dimension of the surface accessible to the operator is no longer adapted to the diameter of the orifice of entrance. He must, therefore, with a spatula or elevator, pry, cut, or even bend the bullet, in order to render it capable of extraction; manœuvres as tedious as they are difficult. In the case of one of the wounds in question, the ball appeared as if rolled out by machinery; both patients succumbed within twenty-four hours.

Col. L., who received a gunshot wound of the right hand, on the outer side of the metacarpo-phalangeal articulation of the index, had the whole palmar surface of the four fingers ploughed by the bullet as far as the cubital border of the auricularis. In spite of the fracture of two phalanges, and the head of the second metacarpal bone, this wound, being subjected to continued cold irrigation, is doing well; everything leads us to hope that the injury sustained by the Colonel will not necessitate the amputation of the General's hand.

R. ———, a grenadier of the 98th Regiment of the Line, has had the left leg pierced by a ball to the depth of three fingers, outside of and below the knee. The fibula alone is divided; nevertheless, this injury, which might at first sight have been considered of slight importance, has suddenly assumed fearful proportions. In the space of four hours the limb has doubled its volume; the skin, cold, tense, and insensible, is livid, and marbled here and there with violet spots; a slight *sui generis* odor exhales from the wounds. Must we attribute this threatening strangulation to the action of the aponeuroses, or rather to a deep-seated extravasation of blood? MM. Larrey, Méry, and myself, are of the opinion that it is advisable to try, as the last chance of preservation, two long, deep incisions on the sides of the limb, the elevation of the foot, and frictions with belladonna. But, vain hope! the sphacelus is fully established, and amputation has become necessary. Should we not have done well to have

relieved all constriction by immediate incision in a case involving a muscular and dense aponeurotic region traversed by important vessels? Is not this just one of those cases which protest against the too exclusive abandonment of the primitive *débridement*; of that methodical, reasonable *débridement*, which throws light on difficult cases, and anticipates serious complications, but the true indications for which I am forced to re-establish elsewhere?

What singular, and, at times, deceptive appearances do we have produced by the passage of balls through the body, and how many new problems do they daily present! An officer displays three wounds, placed one above another, perpendicularly, to the fold of the left groin; two above Poupart's ligament, and one below it. His own conviction is that he received three shots. But as far as the abdomen is concerned, we have no symptom of serious injury; neither the finger nor the sound can penetrate it. Still the skin is extensively and deeply destroyed; they are certainly not simple contusions. But M. X. is very fat; at the moment when the bullet struck him, he was much bent forward. The projectile, then, must have pierced a thick fold of abdominal integument before entering the upper part of the thigh, in which it buried itself. On placing him in the supposed position, the orifices immediately take their respective situations so exactly, that my index finger runs through them with the greatest ease.

An arterial hæmorrhage, (probably of the deep femoral,) produced, without the knowledge of the wounded man, by an incautious movement, carried off, in the course of a few hours, on the evening of the 29th, the brave Commandant, De Lacretelle, one of the young celebrities of the Army of Africa.

The loss of blood was already too great for hope, when M. Cortese endeavored to master it by digital compression, and an instrument which deserves to be better known in France—the compressor of Sognoroni. An opportunity of speaking of it again will doubtless present itself.

I have taken advantage of a hurried interval between two hospital visits, to run out to Marengo. A landed proprietor of Alexandria, a millionaire, they say, has obtained possession of the historic house where the conquering General passed the night before the battle which immortalized the spot. The farm-house is to-day a villa, medleyed with frescoës within and without; thick masses of foliage cast their shadows on the green lawns under which sleep the remains of heroes. In the court of honor stands the statue of Napoleon. Farther on, in the Park, you find the white marble bust of Desaix, by Franceschi.

At the turn of a path, between two witch-elms, a small cupola, supported by elegant little columns, entombs the human bones which the plough and the mattock have exhumed from this Campo-Santo of French valor.

Having left Alexandria at noon on the 30th, for Vercelli, we learn on the way of the victory of the Piedmontese Army at Palestro. Vercelli possesses a very fine civil hospital, and two temporary military hospitals. The first and larger of the two latter, having a capacity for five hundred patients, has been very conveniently located in the Seminary buildings. Numerous arrivals of Sardinian ambulances take place during the night, and on the morning of the 31st we accompany the Surgeon-in-Chief, Baron Larrey, on his visit to the wounded of the night before. We are received by MM. Bima and Larghi and the Surgeon-in-Chief of the Piedmontese Army, Doctor Commisetti; already well known to our colleagues from his courteous and important assistance during the Crimean war. The critical labors of M. Ollier, in France, have done full justice to Dr. Larghi for the part which belongs to him on the question of the sub-periosteal removal of bones. Returning to the doctrines which prevailed anteriorly to Ambrose Paré, M. Larghi proclaims himself very favorable to the cauterization of gunshot wounds. He passes the nitrate of silver freely along the sinuous courses of balls, over surfaces which have been crushed by projectiles, and even to the flaps of an amputated stump. The experience acquired in the treatment of the wounded Piedmontese in 1848 and 1849, has sanctioned this practice in his eyes. By its means he avoids surely, he says, purulent infection, hospital gangrene, and tetanus. Deterision being thus rendered easier, cicatrization is in the same degree accelerated. If the observations which Dr. Larghi cannot fail to make and to publish, confirm this view, we shall say once more, *multa renascentur quæ jam cecidere*.

The large buildings of the National College and the cavalry barracks of Vercelli will furnish excellent refuges for our wounded. On receiving the favorable report of our visit to these places, made in company with the sub-Commissary, De Lavalette, and the principal apothecary, M. Demortain, the Surgeon-in-Chief proposed to the Commissary-General to open a French military hospital in the College immediately. Surgeon-Major Baizeau, and Assistant Surgeon-Major Lhonneur, temporarily detached from the ambulance department, will initiate the medical service.

The reprisals attempted by the Austrians on the 31st of June, to avenge the check at Palestro, and the furious charge of the Third

Zouaves on the enemy's batteries, sent numbers of wounded to the Vercelli Seminary all that night. We had begun to visit them on the morning of July 1st, when the order to leave for Novara was unexpectedly brought us.

The Advance Guard of the Fourth Corps, on arriving before this latter place, drew the last fires of the flying Austrians. We had here a dozen or more wounded men—cases of sufficient importance to demand an amputation of the thigh, of the leg, and of the arm. The two first were performed, I think, by our colleague, Dr. Fenin, at the *Maggiore* Hospital, in the city.

The grand Charity Hospital of Novara, established on a large scale for a city whose population does not exceed seventeen thousand souls, (having from eight hundred to a thousand beds,) is cited, with just cause, as one of the most remarkable benevolent institutions in Italy. Its annual revenues, which exceed 500,000 francs, account for the luxury and the comfort of its arrangements. The well-known M. Omar is its administrator. Among its physicians we would notice Prof. Pagano, a skillful operator and accoucheur, and a lithotomist of considerable reputation.

The branch hospital of St. Julien, the National College, and the Perrone barracks, capable by itself of accommodating one thousand five hundred wounded, assure efficient means for emptying the ambulances at Novara, and the moment is not distant when we shall make proof of their necessity.

On the news of the brilliant actions of Turbigo, Buffalora and Magenta, and the passage of the Ticino, about eight o'clock in the evening of June 4th, we proceed to the *Maggiore* Hospital to prepare for the reception of the wounded, who now begin to arrive. In less than half an hour the convalescents and the slightly wounded are transferred to the Perrone barracks, whence they will to-morrow be sent to Vercelli and Turin. Six hundred beds are thus placed at our disposal, while the hospital authorities, of whose immense resources we have already spoken, have prepared at Perrone beds, mattresses, litters, and bed-clothes, in anticipation of fresh arrivals. At eleven o'clock comes an order for the Ambulance Corps of the General Head-Quarters to appear on the field at the Bridge of Buffalora. I leave to MM. Douchez and Paulet, with the physicians of Novara, the care of the dressings, already commenced, and we take our departure.

The route is encumbered with caissons, artillerymen, cavalry, and wagons filled with the wounded or with stores, to such an extent, that it is not until four o'clock in the morning that we catch sight of the

head of the bridge on the right bank of the Ticino; indeed, we were obliged to avail ourselves of a cross-road in order not to be detained indefinitely on the way. At the distance of about five-eighths of a mile beyond the river, several Sardinian and French divisions are deployed in silence upon a broad, bare plain, the cannon in line and matches lighted. The Austrians had thrown up formidable works, which they do not even dream of disputing with us. The artillery growls in the distance, and the dark and solemn picture is not enlivened by the dim twilight, obscured by a rainy mist.

All night long the wounded have poured unceasingly into the R. R. Terminus of St. Martino, which has been transformed since last evening into an ambulance depot. Baron Larrey himself has presided over their reception, assisted by the ambulance service of the Third Corps, under the orders of the principal medical officer, M. Thomas; several of our colleagues connected with neighboring regiments have voluntarily come to rally around the Surgeon-in-Chief.

At five o'clock we relieved our brethren, whose strength was exhausted, though not their devotion. Hastily to visit the wounded, to appease their thirst and hunger, to readjust their bandages, to extract a few splinters and other foreign bodies, either unperceived or forgotten, this, in the presence of so much suffering to be assuaged, was necessarily the limit of our *ex tempore* assistance. What was to be done, with no other resources than those furnished by our caissons, in a place deserted and long subject to devastation, but to drain off the patients as fast as practicable to Novara? More than 1,400 men removed in this way in less than twenty-four hours, sufficiently indicates how the zeal of our ambulance service rose with the difficulties of the occasion.

During this interval, three capital operations were demanded most urgently by the wounded men themselves, their agonizing sufferings rendering the preservation of a shattered limb, and the prospect of a most painful transportation, longer insupportable. Dr. Quesnoy, of the Third Corps, was thus called upon to trim off the stump of an arm which had been carried away by a large projectile. M. P., a lieutenant in the Zouaves of the Guard, adjured me to cut off his right hand, through which a ball had passed obliquely, from the head of the second metacarpal, above and in front of the wrist-joint. The carpus and the lower extremity of the radius were absolutely pulverized; the palmar arches being divided, had already allowed a considerable loss of blood. I amputated the forearm by the circular operation, at the place of election. I also removed, by the circular operation, (manag-

ing to reserve an antero-external flap,) the thigh, above the condyles of the femur. The case was that of a corporal of the Second Regiment of Grenadiers of the Guard, who had received a penetrating wound of the right knee, with multiple fracture of the patella, and an immense extravasation of blood in the joint. Dr. Martinot, of Cordova, and the ambulance officers of the Head-Quarters, were kind enough to assist me in this operation.

In the evening, having made arrangements for the watch and the reception of ambulances until the next day, I proceeded to Novara to join the medical officers whom I had left the evening previous, and whom I found reinforced by the arrival of Surgeon-Major Baizeau. Our wounded had received the most sympathizing welcome from the enthusiastic inhabitants, and every attention which circumstances permitted from our Franco-Sardinian brethren. Four hundred of those less seriously wounded had gone to report at Turin, in the hospitals organized under the enlightened direction of the Surgeon-in-Chief, M. Salleron.

On again entering San-Martino, on the 6th of June, at an early hour I was brought to the side of an Austrian soldier, in whom a musket-ball had torn away a considerable portion of the posterior muscles of the left thigh, and produced a very comminuted fracture of the upper fourth of the femur. Gangrene already showed itself in the wound, and a formidable disarticulation seemed to be the only resource in his desperate condition. We were on the point of leaving, convinced of the absolute impossibility of transporting the unfortunate man; should we abandon him, without an attempt at aid, to an inevitable and cruel death? We thought not. The operation was performed on the spot, almost without loss of blood, and without syncope or other accident, and had been terminated for three hours, when the patient, worn out beforehand by fatigue, by the extremity of his sufferings, and it may be, too, by hunger, sank into a collapse, whence it was impossible to arouse him.

After the preceding recital, no one will certainly expect of us an analysis, however brief, of the surgical cases which we caught glimpses of, rather than observed, at the ambulance of San-Martino. Nevertheless, I will venture to give you the few following notes, penciled upon my memorandum-book:

B., a chasseur of the Sixteenth Battalion, struck in the right cervical region by a ball which has divided the sterno-cleido-mastoid at its middle, and has gone on from above downward to bury itself near the spinal column, where it cannot be reached by the sound. Paralysis

of the lower limbs was instantaneous; it has progressively attacked the trunk and the arms. Intelligence is perfect. He was carried in a carriage to Novara, where new attempts will be made to find the projectile.

M. M., a captain of the Eighty-Fifth Regiment of Infantry of the Line, has a gunshot wound of the epigastrium, going from a point opposite the gall-bladder, to the transverse apophysis of the tenth or eleventh dorsal vertebra, where I made an incision through the skin, and removed a ball very much altered in shape. The bile flows out in waves by the wound of entrance; all the wounded man's clothes are tinged of a characteristic saffron yellow. There was slight vomiting this morning after taking a little cold water. M. M. does not appear to suspect the danger of his situation. He has no fever, is constantly on foot, and has been going and coming ever since receiving the wound.

A grenadier of the Guard presents three wounds, situated nearly in a straight line; one scooped out like a furrow along the tendon of the great pectoral, one inside of this, and a third on the outer side of the front of the arm. This arrangement seems to indicate the passage of a single projectile, and such was the opinion of the surgeon who made the first dressing. But X. himself is convinced that he received two shots at the same moment. A more careful examination enables me to discover, very deep in the dorsal region, and arrested between two ribs, a conical ball somewhat bent, and covered by a piece of cloth; the ball had pierced the lung.

On the morning of the 5th I had the somewhat rare opportunity of observing quite a number of wounds from side-arms, in the persons of captured Austrian officers, whom the solicitude of the Emperor has recommended to our care. Among them was a colonel, pierced by several bayonet thrusts, two of which were in the abdomen. Another had received a thrust in the face, breaking five or six teeth. I was led to remark that the point of the bayonet, purposely directed towards the breast, was often arrested by the combined strength and elasticity of the costal arches. Fourteen have died at San-Martino during the last twenty-four hours, of wounds of the head and abdomen, both of which are always serious; the latter most dangerous of all.

Towards one o'clock in the afternoon of June 6th, we cross the Ticino on a bridge of boats on our way to Magenta. From the Custom-House of Buffalora to our halting-place, houses riddled with bullets, trees torn by grape-shot, the earth here and there piled up with fresh

graves, shreds of uniforms dangling from the branches, scattered fragments of sabres and guns, at intervals the plaintive neigh of a dying horse, the corpse of an Austrian lying forgotten under a bush—all serve to mark out the field of battle. The inhabitants of Magenta have scarce awakened from the terror which two days of bloody fighting have thrown over its shattered and disjointed walls.

In the cellars and most secret nooks of this desolate town, lie cowering nearly a thousand Austrians, most of them wounded, stifling their groans and forgetting their hunger in the dread which Austrian falsehood had given them of our cruelty! It is our first care to seek out these unhappy creatures, and to demonstrate to them by our kindness how the humanity of France avenges itself for unworthy calumnies! That same evening they were all carried by rail to Milan.

And from Milan, my dear colleague, I shall date this letter. Much would I have liked to tell you my impressions of the phrensied reception of the great city, the transports of joy which burst forth at every step from the people, drunk with our victories and its own deliverance. But excitement, even that of sharing a great joy, brings fatigue; and besides, I dread for you that of reading a letter already out of measure prolix, and hasten to pray you to accept, with my excuses, the expression of my fraternal and affectionate sentiments. 

MILAN, June 8th, 1859.

REVIEWS AND BIBLIOGRAPHY.

A System of Surgery; Pathological, Diagnostic, Therapeutic and Operative. By SAMUEL D. GROSS, M.D., Professor of Surgery in the Jefferson Medical College of Philadelphia; Surgeon to the Philadelphia Hospital; Member of the Imperial Royal Medical Society of Vienna, etc., etc. Illustrated by 1,227 Engravings. Second Edition, much enlarged and carefully revised. In two volumes. Philadelphia: Blanchard & Lea. 1862. 8vo. Vol. I., pp. 1,062; Vol. II., pp. 1,134.

In the MONTHLY for December, 1859, there appeared a notice of Gross's Surgery from the pen of the then senior Editor. A new edition gives us also the opportunity to call the attention of our readers to the work.

It has been characterized by the representative press and by individual surgeons of the highest eminence, both at home and abroad,

as "*the best systematic work on surgery ever published in the English language;*" and that the profession at large have given substantial proofs of their agreement to this verdict, is sufficiently evident from the facts that translations into three European languages have been called for, and that so shortly after its first appearance, and at a time most unfavorable to literary "enterprise," the Philadelphia publishers have found it pay to issue a "second edition, much enlarged and carefully revised." To the honor of the author be it said, that he has been very industrious in the revision, and that far from being a stereotyped reprint with changed title-page, (a dodge so often perpetrated on the unsuspecting public,) the volumes before us have actually been entirely "set up" anew. Dr. Gross in his Preface truthfully states: "In preparing for the press a new edition of this work, I have carefully revised every chapter, introduced a large amount of new matter, and added nearly three hundred illustrations, a portion of them expressly engraved for its pages. The subject of gunshot wounds, invested at this moment with such a fearful interest on this Continent, has received more than ordinary attention. Notwithstanding these additions, it will be seen that the volumes, in consequence of the employment of a smaller type, are somewhat less bulky than the original ones. The general arrangement of the work is the same as in the first edition; and the new matter will be found to be essentially of a practical nature." Owing to the extensiveness of the work, and the fact of its contents having already been presented to our readers, we will not follow the author step by step, but shall mainly limit our remarks to generalities or to such points as have arrested our attention more particularly, or in which the present edition is different from the former.

In the portion of the work entitled *General Surgery*, occupying about 550 pages of the first volume, we do not find any material changes, except such as have been suggested by reviewers of the first edition: and, here, we may at once state that the Professor deserves great credit for the spirit in which he has evidently received, and the laborious solicitude with which he seems to have endeavored to turn to the perfection of his work the *criticisms from all sources*. Many things said about it in the journals, American and foreign, having incidentally come to our notice while traveling in Europe, as well as from our former journalistic connections here, we feel bound to state that every objection that has been raised, every fault that has been found, whether referring to doctrine or style, whether of moment or but trifling, appears to have received careful consideration at the au-

thor's hands. In a few particulars of minor account, he has given up his previous notions, but doctrinal peculiarities, operative hobbies and occasional injustice, (especially to individual *American* practitioners,) and strong prejudices from exaggerated ideas of the value of his own opinion to the exclusion of that of others, are to the discriminating critic, still, painfully manifest: marring, to some extent, the admiration which every reader cannot help but feel for the author as a learned, judicious, experienced and conscientious teacher and practitioner. The carelessness of style so much complained of in the first edition has from many pages entirely disappeared, and if not a model of elegance of diction, the language throughout both volumes is now generally grammatically correct, plain and impressive. To be sure it would not be at all difficult to hunt up many passages militating against this favorable judgment, but it should be recollected that it were strange indeed if, in twenty-two hundred closely-printed pages of didactic practical matter, there were not some inaccuracies and imperfections of manner. To allow the reader to decide for himself how far these faults are impardonable, we will cite two or three instances. The italics are of course ours. Speaking of the pain of scirrhus, our author says: "It may be steady and persistent, but more generally it is intermittent, coming and going apparently *as whim or caprice may dictate*."—P. 263. "It may be stated as a general rule, that complicated fractures of the lower extremity are more dangerous and difficult of management than those of the superior, as well as *more apt to be followed by* distortion and permanent *lameness*."—P. 942. "In one instance, I knew it [fracture of the clavicle] to be produced by the kick of a gun, *in shooting at a flock of pigeons*."—P. 970. These are selected from a number found by opening the book at accidental places and reading carefully, or pointed out in the same manner by a friend; they really form a fair specimen; and if none who could not do better throughout the whole work, should dare to throw the first stone, the author would certainly be safe from reviewers on this score. We should also state, however, that the use of such forcedly Anglicized words as *burse*, *fistule*, etc., is still retained.

Appended to the author's disquisition on the intimate nature of inflammation, vol. i., p. 86, we now for the first time meet with a sprinkling of Virchow, although neither Virchow's positive observations nor his views and explanations can be said to have fairly penetrated, or to have been assimilated with, Gross's System.

As to treatment, blood-letting is still regarded "*the summum reme-*

dium." "If we formerly bled too much, too frequently, too copiously, and too indiscriminately, it is equally certain, at least to my mind, that the operation is not often enough resorted to at the present day. Many a deformed limb, blind eye, enlarged spleen, and crippled lung bear testimony, in every community, to the justice of this remark."—P. 88.

Our author does not yet feel himself warranted in expressing a positive opinion as to the relation of myeloid tumor to encephaloid or fibro-plastic growth.—P. 255.

Eleven pages are devoted to the general consideration of scrofula. "The affections which may be comprised under this term are pulmonary phthisis, chronic enlargement of the ganglions of the neck and other parts of the body, hip-joint disease, psoas, lumbar and chronic abscesses, Pott's disease of the spine, certain forms of follicular ulceration of the mucous membranes, arachnitis, otorrhœa, ozœna, ophthalmia, eczema, and ulceration of the bones. The fact is, the class of scrofulous maladies is almost endless, affecting as they do almost every part of the body, and assuming as they do almost every form of morbid action. Scrofula consists essentially in the deposition of a peculiar morbid product long known by the name of tubercle." It is well as a general rule, our author says a few pages further, to begin the treatment with some mild but efficient aperient, to clear out the bowels, and "improve the secretions." The latter injunction we find quite frequently repeated throughout both volumes. How many of our readers know what exactly is thereby meant? We have personal reasons for knowing that Dr. Gross means R. calomel, or blue mass, and colocynth, a big dose. We have looked in vain for an explanation of the *modus operandi*. Of the lancet, he here says, it "must be employed with the greatest care; but I am satisfied that it is often of immense benefit in arresting the morbid action, and that it has fallen into too much neglect in the treatment of scrofulous diseases."—P. 293.

Of the healing of wounds by Macartney's *immediate union* he still expresses himself—and we by no means disagree with him—"I am satisfied that it is impossible for any wound, however induced, situated, or treated, to heal by immediate union, or without the intervention of inflammation and effusion of lymph."—P. 308.

The whole chapter on wounds is a complete and well-considered one; and Gunshot wounds are, as already indicated, treated of with unusually great care. The author has been on the battle-field, or at least in the military hospitals after "Bull Run;" but we must regret

that he has not also availed himself of the most recent European experience. In the "author's forceps" for extracting bullets (p. 336) we cannot see anything particularly original; [a remark that might be repeated of several instruments delineated in various parts of the work as "the author's."]

The nine pages headed "Effects of Injuries upon the Nervous System," briefly considering, in two sections, prostration, collapse, or shock; and traumatic delirium, are well condensed, and valuable to the advanced student.

The next chapter is devoted to Syphilis, (p. 381-445.) Not only has the author, from his eminent position as practitioner and public teacher, doubtless had much experience, but he may have bestowed upon the discussion of this subject a great deal of time, and care, and labor, for he certainly enters upon it thoroughly and in detail. Yet, to be just, we must say that this chapter, with the exception, perhaps, of a few redeeming practical hints, is exceedingly unsatisfactory. At some points not at all up to, at others going beyond, the present state of syphilidological knowledge, it irresistibly impresses us with the idea of a "patched-up affair," if we may be allowed to use such an expression. To review this chapter in detail, would require more space than we dare command, after our introductory declarations; but we cannot satisfy ourselves without selecting from a great number at least two or three gross (we intend neither a stale pun nor any disrespect) statements, and submitting them to the honored author's consideration.

"It has been conclusively shown that if a chancre, even if it pertain to the indurated variety, be cured or removed before the end of the fifth day from the time of the inoculation, there is, as a general rule, no risk whatever of systemic contamination."—P. 407.

"[The time at which a female with secondary symptoms may communicate the poison to her offspring cannot be accurately stated. The probability is that it is very short. This is proved by the circumstance that such a woman frequently aborts within a few months after conception, evidently in consequence of the deleterious effects of the virus upon the foetus.] I suppose that the contamination is coeval with conception, occurring at the moment of the commingling of the two seminal fluids; for if it be assumed, as we have a right to do from the facts of the case, that the male can communicate the poison in this manner, why should a similar faculty not be ascribed to the female? She, too, furnishes a fecundating substance—a seminal liquor—which can no more escape contamination when her system is

affected with secondary syphilis, than the seminal fluid of the male."—P. 440.

"[The most important internal remedy is mercury, and it is here (in the treatment of infantile syphilis) that this article often displays its effects to the greatest advantage in neutralizing the specific virus. If any one should doubt the efficacy of this medicine, as an antisymphilitic agent, his skepticism will soon vanish if he will take the trouble to watch the progress of the treatment and the good results that will follow it. If it is not positively a specific, it approaches as nearly this property in this disease as anything well can, quinine in intermittent fever hardly excepted. The form of exhibition is the bichloride, in doses varying from the fortieth to the fiftieth of a grain three times in the twenty-four hours, dissolved in distilled water, or, when there is need of a tonic, in a few drops of Huxham's tincture of bark. This should be steadily continued, with now and then a few days' intermission, for a number of weeks, not only until all disease is apparently gone, but for a considerable period after; and it will be well, for the sake of the more complete eradication of the poison, to recur to the remedy occasionally until the child is several years of age.] When the disease proves obstinate, the bichloride may generally be advantageously conjoined with the iodide of potassium, from the fourth to the eighth of a grain being given with each dose of the salt, according to the age of the child."—P. 444.

To do no injustice to the author, we have quoted so much of the context; and as to the last sentence, to show that we are not hypercritical, we will add, that every one of five students, and several practitioners of not less than ordinary intelligence whom we desired to read the whole paragraph attentively, averred it to be Prof. Gross's recommendation to give $\frac{1}{4}$ to $\frac{1}{8}$ grain bichloride of mercury with each dose of the iodide of potassium, according to the age of the child, (the precise dose of the iodide, they said, not being stated.)

In regard to the value of curative syphilization—a mode of treatment that he has never practiced, nor ever seen—it is of course impossible for the author to form a definite estimate. His objection, however, that it is "exceedingly filthy and disgusting," is a very poor argument against it. We, for our part, regard mercurial inunction just as filthy and disgusting at least.

The chapter immediately following that on Syphilis is on "General Diagnosis;" a chapter well conceived, and still better executed.

Let us next turn to *Special Surgery*, which occupies the latter

portion of the first, and, with the Index, the whole of the second volume.

(Will be concluded in next number.)

Health: Five Lay Sermons to Working People. By JOHN BROWN, M.D., Author of "Rab and his Friends," etc. New York: Robert Carter & Brothers, No. 530 Broadway. 1862.

To no one who has read "Rab and his Friends" will it be necessary to recommend this little volume. Any who have not, we advise to procure either, and we are certain that they will want the other. The author's distinguishing characteristic is a broad humanitarianism, not, as is too often the case, degenerating into a worship of the creature at the expense of the veneration due the Creator, but tempered with, and ennobled by, the deepest religious feeling and reverence for the Supreme Ruler of events. The creature is excellent, and to be admired, and nurtured, and cared for, because it is the master-piece of the Creator's art.

The subjects of the five sermons are as follows: I. The Doctor—Our Duties to him; II. His Duties to Us; III. Children, and How to Guide them; IV. Health; V. Medical Odds and Ends.

Three of them, he tells us in the preface, "were written for and (shall I say?) preached some years ago, in one of the earliest missionary stations in Edinburgh," and delivered thus orally they must have reached most effectively the class whom they are now especially intended to benefit, but whom, in their present form, we should be inclined to think they would, as a rule, miss. They will, however, be not less useful among another class, for the members of which many of their wholesome teachings will be quite as serviceable as for their poorer brethren. The caution against *fast living*, for instance, found in the preface, taken in no bad sense, is most pertinent to our own countrymen; perhaps to none more than to our own profession in this country. He says well, that "a man who lives to be seventy, and has ten children, and (say) five-and-twenty grandchildren, is of more worth to the State than three men who die at thirty, and, it is to be hoped, unmarried." Nor is it the poor man alone who needs to be taught his duties to the Doctor, or that gratitude is dearer to him than his fee, or that "*sleep is the food of the brain*," or that "the great thing for the lungs is plenty of fresh air and plenty of room to play in;" or that "all violent passions and irregularities of living *damage* the

heart," "out of which are the issues of life." All through the book, which is written in a delightfully simple, and yet vigorous style, we see the same large, warm heart, which was so full of sympathy for that gentle, patient, sweet "Auld Ailie," of whose painful end he has given so touching an account in "Rab and his Friends."

As might be expected from a man of sound common sense, he "is for beards, out and out, because he thinks the Maker of the beard was, and is;" and is honestly indignant at the encroachments of the tyrant Fashion on our health and comfort, and especially at its inexorable, torturing, deforming, iron grasp on our poor feet. To remedy this latter evil, he advises his hearers to "buy a sixpence worth of wisdom from Edmonston & Douglas," in "Why the Shoe Pinches," and have their shoes made accordingly. We feel that we cannot better close our brief notice of this delightful little book, than by giving our readers the same advice, slightly altered. Provide yourselves with boots made on "Dr. Plumer's Patent Lasts," and you will thank us for the recommendation. For although we are not disposed to agree with his dogma, that the transverse arch of the foot needs artificial bolstering up, the fundamental principle of the arch being, that it is self-supporting, and that pressure from above only strengthens, while pressure from below weakens, if it does not destroy it, still the contour of his sole conforms so much more closely to that of the undistorted human foot, that we consider the boot an immense improvement on the present barbarous, though fashionable, (or perhaps, barbarous, *because* fashionable) style. The appearance of the book is very attractive, and its flexible cover makes it a handy thing for the physician to slip into his pocket, and read as he rides between his visits.



Report of the Resident Physician of the New York City Lunatic Asylum, Blackwell's Island, New York, for the Year 1861.

In this valuable report, Dr. Ranney gives us the statistics of his Institution, not for the past year alone, but for the last fifteen years. The admissions into the Institution—which derives its inmates from the poor of the city, the public charitable institutions, and the emigrants—have been for the year, 149 males, and 239 females, the whole number under treatment having been 1,142. There remained under treatment on the 31st December, 805. With regard to the causes of death, the following interesting statement is made: "Of the deaths, nearly one-half were from consumption and softening of the brain.

Consumption must ever hold a prominent place among the causes of death in a lunatic asylum—any organic disease in the brain diminishing the supply of nervous fluid to the lungs, and thus increasing their susceptibility to disease. Softening of the brain, a disease nearly always terminating fatally, is of comparatively modern date, and evidently increasing in frequency." A reference to the statistical table of deaths for the past fifteen years, shows the former disease to have been the cause of death in nearly one-third of the whole number. The fact that out of upward of a thousand patients, only two have committed suicide during the year, speaks much for the completeness of the police regulations, as well as the calmative character of the treatment adopted.

The Report dwells upon the necessity for a more extensive accommodation for the Insane, and asserts as a ground, the somewhat startling fact, that "from the records of this department it appears that for the last forty years the number of insane has doubled every ten years," adding that "there is little prospect of diminishing this ratio." We trust, at least, that it will not increase. Otherwise the idea of the cunning lunatic that insanity was merely a matter of the opinion of the majority, he being unfortunately in the minority, may come to have a very unpleasant reality, and we who flatter ourselves that we are sane may suddenly discover that the balance is on the other side.



On Medical Provision for Railroads as a Humanitarian Measure, etc.
Read before the State Medical Society. By EDMUND ARNOLD,
M.D., M.R.C.S.E., Delegate from Westchester County.

We prefer leaving off the latter portion of the title of this paper, having reference to the pockets of the companies, as we do not think that physicians, either individually or collectively, and especially the State Medical Society, have anything to do with that matter. The humanitarian is the only motive which they should urge, and this is urged with a good deal of force by the author. In an editorial article in the January number, having reference to the purchase of St. Thomas' Hospital, London, by a railroad company, we jestingly alluded to the comfortable state of feeling that would be engendered in the bosom of a timid traveler if he should have prominently brought before his mind the vision of a hospital with open doors, and a surgeon with amputating-knife in hand, waiting to receive him at the terminus. We beg leave to say that Dr. Arnold's paper has put the

matter before us in a different and more serious as well as more practical light, and that his suggestions appear to us worthy of being carried out, as indeed the bill now before the Legislature renders it probable that they will. 

Braithwaite's Retrospect of Practical Medicine and Surgery. Part the Forty-fourth. Uniform American Edition. New York: W. A. Townsend, 39 Walker Street.

This compend continues to maintain its high standard of interest and value. The present part is especially rich in the obstetric department, containing valuable articles from Simpson, Barnes, Hewitt, Murphy, Duncan, Tyler Smith, Barker, and other well known obstetricians.

We observe that American Pharmaceutical preparations are attracting a good deal of attention in England. The *actea racemosa* in rheumatism, and *veratrum viride*, as an arterial sedative, both find places in the volume before us. The *London Lancet*, too, in initiating a series of articles on New Remedies, makes special reference to the advances made by us in this direction, and quotes quite extensively from American periodicals.

Valuable papers on the Employment of Alcohol in Medicine, as well as on its properties as an aliment, will also be found under the head of Miscellaneous Subjects. 

EDITORIAL AND MISCELLANEOUS.

THE SANITARY COMMISSION. PRO BONO PUBLICO.

The Sanitary Commission, notwithstanding the very important services they have rendered to our Army, have been, ever since the initiation of the movement, and we are sorry to say are still, the objects of a most persistent and unwarranted opposition on the part of certain members of the profession.

This unfortunate animosity has found a mouth-piece in a Philadelphia contemporary, which has displayed in its attacks a degree of petty malignity, and a reckless disregard of professional courtesy, entirely unworthy a scientific journal. Side by side with these aspersions, have been articles in the highest degree laudatory of the Surgeon-General, and the conduct of matters by his department, leaving no

room for doubt that the motive of the antagonism was personal friendship for the head of the Army Medical Department, and a dread lest he should be interfered with, or displaced in consequence of any representation of the Commission. Was this dread well founded? Has the course of the Sanitary Commission been such as to lead to the conclusion, that the main object of their organization was, as their enemies would have us believe, "to displace the machinery which for more than two-score years has accommodated its capacity and dimensions fully to the demands of the Army, and of the Government, to make a cozy nest for some of its own adherents?" A brief review of the history of its relations to the Medical Bureau will, we think, be essential to a proper answering of this question.

At the time when the signature of the President gave the Commission its legal existence and authority, the venerable Dr. R. C. Wood was acting Surgeon-General; Surgeon Lawson being prevented from the discharge of the duties of the office by illness. Dr. Wood received with the greatest respect the suggestions of the gentlemen of the Commission, placed every means in his power at their disposal, co-operated with them as far as possible in their endeavors to promote hygienic regulations, and supply deficiencies among our troops so hastily gathered, and so ignorant of the *savoir vivre* of the camp; in short, met them in the same generous spirit of devotion to the common weal, which had prompted them to volunteer their services. The Commission naturally congratulated themselves that they were to work together, in such perfect harmony with the regular department, for they could not but feel that the success of their efforts depended in great measure upon the hearty co-operation of those in authority. This cordial co-working, however, was of short duration. The illness of Surgeon-General Lawson terminated fatally. Wood ceased to represent him in the Bureau, and Finlay succeeded to the dignity and authority of the office. Immediately upon entering it, he gave the Commission to understand that he considered them as intruders and interlopers, and that while, owing to the President's sanction of their operations, he should be obliged to afford them certain facilities, all his personal influence should be used against them. This spirit of obstinate opposition to all the reforms suggested by the Commission, he was enabled to infuse, to a considerable extent, into his inferiors in the service, and in this way he has succeeded in interfering most seriously with the philanthropic labors of the Commission, and delayed the success of their plans. The sequel has showed, however, who was most injured by this dogged antagonism. The individual who, regardless

of the capacity of his cranium for resistance, persists in butting his head against the stone wall of public opinion, enlightened progress and necessary reforms, will invariably go to the ground. Thus repulsed and embarrassed, what would have been the natural course of the Commission had they been actuated by the motives attributed to them? Obviously to publish to the country the damning evidence which they were daily accumulating in their inspection of camps and hospitals, of the inefficiency and inadequacy of the department, as constituted, to meet the fearful emergencies of the hour. Did they adopt this course? On the contrary, they endeavored in every possible way to cover up the defects of the system, making most respectful representations to the Surgeon-General himself of evils which they discovered, and for which the remedies were evident; when these representations were neglected, repeating them over and over again, and if still unnoticed, supplying out of their own limited stores what they felt to be absolutely necessary that the army might not be demoralized and Government disgraced.

Instances came to their notice, day after day, which, had they committed them to the public press, would have roused such a whirlwind of indignation that the President would have been compelled to anticipate his recent action by months. One case in particular we may cite as an example of many. The condition of the Hospital for Eruptive Diseases was found last summer by a member of the Commission to be such as called for immediate interference. Not only were the accommodations inadequate to the numbers received, the ventilation extremely defective, the wards foul and offensive, the nursing insufficient, but, to crown all, small-pox was distributed indiscriminately among the less deadly exanthems. It required no prophet to foretell that this pest-house must soon become a focus of infection, whose fatal influences should radiate to the whole Army of the Potomac. The Commission accordingly made the most urgent appeals to the medical authorities to have a building set apart for the sequestration of this loathsome disease, and ambulances reserved especially for the conveyance of those affected with it. Their remonstrances fell upon deaf ears. The wards grew more and more crowded. The commingling more and more reckless. In due time, soldiers arriving with measles, or scarlatina, recovered, and were suffered to return, unvaccinated, to their respective regiments; and just so sure as their return, so surely came back the indignant remonstrance from the regimental surgeons, "In Heaven's name, hold! you are sending us death!" That the seed thus widely sown bore an abundant crop, the cemeteries of the camps

will testify, and the bills of mortality will corroborate their testimony. Heart-sick at this wanton neglect, the Commission were at length compelled to apply to the Commander-in-Chief, and by his especial order, a small-pox hospital was established, and proper regulations were made with regard to ambulances conveying patients to it. And thus the plague was stayed, but not until Washington City had been repaid with fearful interest for the scourge that it had sent into the field. It is unnecessary to multiply instances wherein the Commission has thus remedied the defects and glossed over the short-comings of the Department. Its enemies themselves admit that the Report of its Secretary pays "a just and merited tribute to the State and National Governments, and especially to the Medical Bureau," and in its actions as well as its reports, it has ever been careful to refrain as far as that Bureau permitted it to do so, from anything which would cast reproach or suspicion upon it.

The report to which reference has been made is a most complete and masterly document, giving not only a view of a vast field of work, but containing carefully arranged statistics, bearing on the health of camps, which cannot fail to be of great practical value. It has been most flatteringly noticed by all the foreign journals of medical, sanitary, and military science. Even the *London Times*, that persistent vilifier of everything *American*, fails to find anything to criticize in its pages, and devotes a column to its laborious details, which it considers without a parallel, save in the wonderful results of German statisticians, who have had years, instead of months, wherein to prepare them. And yet our Philadelphia critic can find nothing to admire in it. The tangible results, to his eye, are narrowed down to "the vaccination of more than twenty thousand men." And in this, we are told it has but "relieved the Medical Bureau, always ready and able to perform its whole duty in protecting the army from this dreadful scourge, of a portion of its labors." If the Medical Bureau is always thus ready and able, why did it allow an entire army of unvaccinated men to sail for Port Royal without a particle of vaccine matter, leaving the deficiency to be supplied by the Inspector of the Sanitary Commission on its arrival?

The admirable little tracts which the Commission, availing itself of the first talent in the profession in all our large cities, has issued for the use of army surgeons, necessarily without the counsel afforded by a library, and which are models of point and brevity, he considers "as paying a very equivocal compliment to their intelligence." For ourselves, if suddenly called to take the field, we should

feel most grateful for any such little handy reminders of the grand principles on which our treatment must be founded, or its more minute details. It may be that the "intelligence" of our editorial brother is of so high an order, that he is placed far above all necessity for any such adjuvants. If so, we congratulate him. The articles in opposition to *Revaccination* and *Prophylaxis by Quinine*, as recommended by the Commission, we had hardly expected to meet in a medical journal. However, we could scarcely have anticipated any very high standard of scientific criticism in a periodical which gives, in one number, an astonishing account of "*Eight Children at a Birth*," with circumstantial details of the wonderful gemelliparous ancestry of the prolific mother, and in the next, a recipe in full for the preparation of an "*Instantaneous Black Hair Dye*," which smacks strongly of the last Quack Almanac. Fortunately for the readers of the journal in question, the intelligent physician who "does" its science endeavors, as far as possible, to counteract the evil effects of its blunders. Just as surely as an error creeps into an editorial, does the vigilant Gibbs insert the antidote in the *Periscope*, or some contributor, either intentionally or accidentally, furnishes the correction. Does the editor insert a long article from a Western journal, the object of which is to prove that "the best of all prophylactics is good health to be maintained by appropriate hygienic measures," (which hygienic measures, as it gives them in detail, are utterly unattainable by an army in the field,) prefacing the extract with some contemptuous remarks as to the folly of "dosing every soldier in the army with quinine?" The *Periscopist* follows up with two columns and a half, strongly urging the subject as an "all-important one," "coming with tidings of joy and words of comfort to those who are subject to the influence of the poison."

Does the editor express his opinion that a single "vaccination is a positive and *unlimited* protection against small-pox," and at the same time expose the weakness of his Latinity by speaking of *exanthematæ*?

The Surgeon of the 54th Regiment P. V. is on hand to certify that out of some five hundred men who were revaccinated in his regiment, "the revaccination was perfectly successful in at least three hundred cases."

Does the editor hold up his hands in holy horror, and shed maudlin tears over the "inhumanity" of the iced-bath? The injured Dr. Bauer hastens to the rescue with an indignant remonstrance.

But the most offensive and ungentlemanly of these attacks have been those which charged the Commission with appropriating to their own personal uses moneys given them in sacred trust, for the good of

the soldier. Nor are they less offensive because false. We are confident that no member of the Commission, as such, has drawn a single dollar from its treasury beyond his traveling expenses, when journeying on the business of the Commission; and we happen to know that some of them who have made repeated visits to Washington, have never made a draft upon the Treasurer. To accuse the Commission of salarizing its employees, its Secretary and Inspectors, is simply to accuse them of doing what every charitable association does, and without which, no charitable operations could be carried on.

Who would think of charging the managers of the American Bible Society with "appropriating to themselves a liberal salary from the donations of charity" because it employs a paid Secretary, and paid agents and missionaries? And yet the case is precisely analogous. The men to whom must be intrusted the work of sanitary inspection, are young men who cannot afford to give their services, however much their heart may be in the work, and at the same time, men of education and ability, whose labors will ever command a fair remuneration. It needs no logic to prove that the money which sends an inspector whose vigilance assures to the soldier a well-drained camp, a well-ventilated tent, well-cooked food, and an observance of sanitary precautions on the part of his officers, is just as truly "expended for the direct benefit of the poor soldier" as that which provides him with food and raiment, or hospital accommodations. But that they do not confine themselves to mere inspection is sufficiently proved by the records of every battle-field. From Port Royal and Newbern, and Roanoke, from the Potomac and the Mississippi, we hear the same record of their untiring exertions for the relief of the sick and wounded, and the great acceptableness of the stores with which they have gone provided.

Our critic seems to think he is saying a very severe thing of the Commission in calling it the "almoner of public charity." This is precisely one of the principal objects with which it was organized—that it might systematize and utilize this great movement of the people's heart, longing to do something for the comfort of their brothers in the field. And in this it has been most signally successful. We venture to say, that not an article of clothing has gone through the hands of the Commission that has not been well and wisely bestowed, while it is a well known fact, that box after box which has been sent in a private way, has failed of its destination, and is now stowed away, forgotten, in some Government storehouse. Nor is the other supposition less unfounded or absurd, that prominent medical men in this or other

large cities, whose practice brings them an income double the salary of the Surgeon-General, are aiming to dispossess that functionary that they may slip into his or other more subordinate positions. No one can entertain a higher regard than ourselves for the Medical Staff of the Regular Army of the United States. We have always regarded it with peculiar pride. Whether or not Dr. Finlay was the best man to preside over it, the powers that be have already decided, and it is not for us to question their decision. But under the present immense pressure to which it is subjected, and with the increased demands that must be made upon it for many years to come, it is little to say that it is imperatively necessary that it should be remodeled, on a basis adequate to the emergency; and that remodeling alone can do away with the necessity for the Sanitary Commission.

We have spoken of friendship for Dr. Finlay as the apparent cause of the hostility of this journal to the Sanitary Commission. The first number of its new volume lets us a little more behind the scenes; for it makes the announcement, that "through the official action of Government," (it is difficult to conceive, by the way, how *Government* could take any action that would not be *official*,) "the REPORTER is regularly sent to the various military stations throughout the country." Is this a reward for services rendered, or the stimulus which led to their performance? In either case, if success be the test of desert, the unfortunate result for Dr. Finlay would seem to show that the champion had been considerably overpaid. 

— CHANGES IN THE U. S. MEDICAL BUREAU.—Since our last issue, the following important changes have taken place in the Army Medical Department: 1st, Surgeon-General Finlay has been ordered to Boston; 2nd, The Medical Reform Bill has become a law; and 3d, Under its provisions, the PRESIDENT has selected William A. Hammond, M.D., as Surgeon-General of the U. S. Army, with the rank of Brigadier-General.

THE SINEWS.—We regret to be compelled to call the attention of many of our old subscribers to the fact that their subscriptions are still unpaid. If the deficiency is not soon met, we shall be obliged to curtail our issue, and, of course, those will feel the effects of it who have failed to furnish the means for its continuance on its present basis. All remittances should be addressed to the "Office of Publication," No. 12 Clinton Place. Registered letters will be at the risk of the proprietor. 

THE AMERICAN MEDICAL MONTHLY.

JUNE, 1862.

LECTURES, MONOGRAPHS, AND CASES.

A Clinical Lecture on Paraplegia. By T. GAILLARD THOMAS, M.D.,
Physician to Bellevue Hospital.

During my present term of service, gentlemen, I have shown you a number of cases of paralysis due to organic disease of the spinal cord. Among these, you have seen cases of acute and chronic softening, of congestion, and one case of a tumor pressing upon the cord. The experience which you have obtained by observation of these cases has taught you how serious any one of them is apt to prove to the process of innervation, and in several instances you have seen fatal terminations occur.

Quite a number of cases of paraplegia, due to some serious lesion of the cord, remain, which I have not yet shown; but I will delay doing so, and will to-day bring to your attention cases of that affection due to functional derangement of the cord. I would preface the investigation of these cases by remarking, that paraplegia is a paralysis of the lower limbs, due to a disordered state of the spinal cord, and that this disorder may be either organic (implicating the integrity of the cord itself) or functional, (involving merely a temporary departure from the physiological action of this important part.)

That these two varieties of paraplegia exist entirely distinct the one from the other, and that their pathology, etiology, prognosis and treatment are essentially different, I think that I can give you abun-

dant proof by developing the material in our service, and to that end I will now proceed. The great difference between functional and organic paraplegia has long been recognized, but of late years very much has been added to our knowledge on the subject by the labors of Brown-Séquard. The nomenclature which I have here given you is not that adopted by him, he having applied the name reflex paraplegia to that variety which I term functional, regarding the derangement in the cord as generally due to some irritation reflected upon it from another part. Undoubtedly this is often true, but I so much prefer the generic term "functional paralysis" for such cases, making the "reflex paralysis" a species, that I shall here use it.

It is evidently of great importance, as soon as we are called to a case of paraplegia, to be able to say with positiveness whether it be of organic or functional variety. Generally, this will be attainable, but in some cases time only can decide whether or not the structure of the cord be affected. But all these points will be more clearly defined and illustrated by the investigation of some of the cases in the service. First, I call your attention to Rosanna McAtee, a native of Ireland, single, aged 20, who was admitted here on the 4th of May, 1860. She tells us that two years before her admission, up to which time she had been perfectly healthy, she began to suffer from pain in the head and dizziness. After these symptoms had continued for some weeks, she was much surprised to find that in mounting the stairs her knees gave way under her, and that in the dark or with her eyes closed, she would totter very much in walking. Soon after, the sense of touch became much impaired in her feet and in the right hand, which she thinks was at that time feeble. Still she continued her avocation of servant-girl. Gradually, however, she became weaker and weaker in the legs, and after six months had elapsed, was forced to give up her situation as domestic. For eighteen months more she continued to fail, and on the date above mentioned, entered here in the following state, as noted by the House-Physician in charge of the wards:

"When she entered the hospital she was totally unable to walk, and could stand with great difficulty; on attempting to bear her weight on her limbs, she was "seized with a trembling," which soon compelled her to sit down. The power of grasping with the right hand was almost lost; with the left she could exert a feeble pressure. No point of tenderness could be discovered over the spine. There was no difficulty in urination; her bowels were regular; her general health good.

"There has been no pain in the back, no sensation as of a band

passed around the body, no spasm, no trouble about the sphincters, no sense of prickling or formication, no great fall of temperature in the paralyzed limbs, and the paralysis has never been complete."

Now I do not pretend to offer you this as a type of the class of which I have been speaking; its duration has been unusually long for functional paraplegia; but I am convinced that it is of that class, and feeling so, shall venture a favorable prognosis concerning it, and adopt a course of treatment which would be injurious if the cord be diseased.

But you may ask, What are the grounds for my conviction? I do not know that I could better give them than in the following tabulated comparison of the two varieties of disease which are engaging our attention. All the evidence, you will see, is in favor of my conclusion; were it otherwise, so would that conclusion have been.

Organic Paraplegia.

1. Comes on suddenly, and is more or less complete.

2. There is pain in back, extending down the legs and around the body.

3. Passing ice or hot water down spine gives great pain.

4. Jerking or spasm of muscles of legs exists.

5. Bladder and rectum are affected.

6. Prickling and formication occur.

7. As time passes the paralysis becomes worse.

8. There is great tendency to bed-sores.

9. Extremities are colder than normal.

10. Sensibility impaired.

11. Muscular enfeeblement is strictly confined to the lower limbs.

Functional Paraplegia.

1. Comes on gradually, and is always partial.

2. No fixed pain in back or legs, and no "band" around body.

3. None is experienced.

4. None.

5. Not so.

6. None.

7. As time passes it diminishes.

8. None whatever.

9. Temperature normal.

10. Not so to any great degree.

11. There is often a tendency to enfeeblement of upper limbs.

In speaking of the treatment of organic paraplegia, I told you that the indication is to disgorge as much as possible the vessels of the cord, and produce a sedative, quieting effect upon it. In the functional variety the reverse is true; we should endeavor to stimulate the functions and circulation of the cord.

To this end, no drug compares for an instant in value with strychnine.

nia, and I shall prescribe that here, to be given until a decided constitutional effect is produced. At the same time I shall direct the use of cold shower baths along the spine, and the frequent application of electricity. The patient must be encouraged to exercise the muscles systematically and steadily, and she will receive the best diet which the institution affords. My experience with these cases leads me to hope and believe that under this course she will rapidly recover.

Four months after the above date, the House-Physician's notes state: "Patient has steadily but very slowly improved. She can now stand well without assistance, and can even walk a few steps if allowed time. Her gait is slovenly, but not staggering. She can grasp quite forcibly with both hands, though she says the right feels weaker than the left. Her general health has been good all the time."

What the cause of this girl's paralysis was and is, I am entirely unable to tell you, as after a careful search I have been able to find nothing in any way offering an explanation of it. The general causes for this variety of paraplegia are these:

1. Blood poisoning, *e. g.*: Syphilis, Lead, Arsenic, Diphtheria.
2. Intense irritation of any part of the nervous system, *e. g.*: Worms, Dentition, Disease of genito-urinary system, and any acute affection.
3. Hysteria.
4. Great impoverishment of the blood, as after malarious fevers, parturition, &c., &c.

From all of these I have seen paralysis occur, and from most of them paraplegia. Of several I will proceed to show you examples; and with reference to those which I shall not to-day illustrate, I will merely say that abundant evidence exists in the literature of the profession and my own experience for enumerating them.

CASE II.—Rebecca M., æt. 24, married, a native of Ireland, admitted to the hospital in May, 1861. The patient entered in the second stage of phthisis, but was able for two months after admission to walk about with perfect ease. About four months ago she observed that her feet dragged on the floor, that her knees refused to bear her in mounting the stairs, and that sensibility in the lower limbs was becoming rapidly impaired. These symptoms, unaccompanied by others, went on increasing, until she became unable to stand or walk.

Upon a careful exploration, I find unmistakable evidences of syphilitic disease, in the form of nodes, enlarged glands, &c., &c.; and as I can discover no other cause for this paralysis, which I am of opinion (for reasons which it would be useless to repeat) is functional, I

am led to regard this poison as the cause of the trouble. I shall order for her iodide of potassium, in five-grain doses, to be repeated three times a day, regular and systematized exercise of the muscles, the douche to the spine, and good diet. Her pulmonary difficulty advances but slowly, and is not, I think, connected with the nervous disorder as a cause.*

I will relate to you in this connection a case which occurred in private practice.

CASE III.—M. B., a robust, handsome boy, four years old, was suddenly taken in Nov., 1861, with acute rheumatism, which ran its usual course in about three weeks, leaving the heart unaffected. While convalescing from this, he was seized with pneumonia, from which he was exceedingly ill, but in two weeks recovered. He then contracted a violent and very peculiar coryza, from which he suffered severely for between three and four weeks. It was not diphtheritic in its nature. This having passed off, I encouraged my little patient to rise, but, to my surprise, found that his lower limbs were almost entirely paralyzed, and the upper ones considerably enfeebled. He was unable to stand even for a second, and lifted the feet with great difficulty. Dr. Metcalfe saw the patient with me at this time, and agreed in the propriety of its being regarded as a case of paralysis due to a derangement of the spinal cord, merely functional in its nature.

The child was put upon the use of ext. nucis vomicæ, was bathed twice daily with salt water, and encouraged to move the limbs as much as possible. The attack slowly passed off, and he in a few months recovered entirely. Whether this paralysis was due, as Brown-Séguard would probably have thought, to the rheumatic or pneumonic inflammation, or to the toxæmia resulting from the series of diseases from which the little fellow suffered, I am unable to say; but my belief was then, and is now, that the latter was the more probable solution to the problem.

The last case which I shall show you to-day is one of great interest to me, as it presents one of the most perfect instances of the "reflex paraplegia" of Brown-Séguard that I have ever met with.

CASE IV.—Mary Lewis, born in Ohio, æt. 23 years, married, admitted to the hospital on the 14th of April. The patient enjoyed perfectly good health until about six weeks ago, when she was attacked by acute dysentery, which was accompanied by constant nau-

* This patient subsequently recovered entirely, and is now in the wards of Bellevue for phthisis.

sea and vomiting. After this had lasted for a week, she noticed a prickling sensation in the legs, and found herself growing gradually feeble in these members. In about three weeks from this time she became almost entirely paraplegic, so as not to be able to walk without great assistance; as I now direct her to stand, you observe that she sways to and fro, and every now and then seems about to fall, which she would do, if not prevented by firm support. Her left arm has likewise become somewhat, though not a great deal, enfeebled. Besides the symptoms mentioned, she has none pointing towards the spinal cord; there is no trouble about the bladder or rectum, and only for a week has pain in the back been complained of. The dysentery still continues, although not with its former violence.

This case I regard, gentlemen, as a good type of the reflex paralysis of Séquard. What the absolute connection is between the ulcerations in the large intestine (or, at least, the inflammation there,) and the enfeeblement of the muscular system, I am not prepared to say, for I am free to confess a great degree of skepticism as to the hypotheses of Brown-Séquard on the subject; still, in the present state of pathology, I know of no better way of dealing with this case of functional paraplegia than by classing it with the reflex variety of that eminent investigator.

The treatment which I shall adopt in this case will be entirely directed to the dysenteric trouble. If, as I suppose, the other is secondary to this, it may pass off without treatment; should it not do so, it shall engage our attention at a future period.

May 14th.—I show you again the patient Mary Lewis. She has now entirely recovered from the dysentery, and the paraplegia has so far passed off that she can stand and walk across the floor without assistance. When in the presence of Drs. Flint and Clark, she was this morning demonstrating her ability to walk; I requested her to shut her eyes, and she suddenly and violently fell to the floor. She can stand without difficulty with her eyes open, but the instant that she shuts them she falls as if shot through the head. This curious pathological phenomenon I have noticed in a number of cases of functional paraplegia; so commonly, indeed, that I am now inquiring, by clinical investigation, whether it be not diagnostic of this variety, at least to a limited degree.*

* This patient is now in Ward 27, bed No. 3, Bellevue Hospital, and may be at any time seen by any one interested in its history.

Some time ago, a male patient suffering from phthisis and empyema in this hospital, was affected by paraplegia, which was regarded by the physicians of the service in which he was as organic. One day Dr. Echeverria, in going through the wards, directed him to stand erect (which he could readily do) and close his eyes, when instantly he fell to the floor, as you have seen Mary Lewis do. This being repeated, the same result instantly took place.

The patient died, and a careful autopsy revealed the cord in a perfectly healthy condition; the case having been one, I think, of functional paralysis, perhaps dependent upon irritation reflected from the diseased pulmonary or pleural surfaces; in other words, a case of reflex paraplegia.

Affections of the Lymphatic Glands attendant upon Soft Chancres.
By ALFRED L. LOOMIS, M.D., Physician to Bellevue Hospital.

There are two recognized affections of the lymphatic glands attendant upon soft chancres. These depend upon distinct causes, and in the phenomena which attend their development and their termination there is a marked difference. One is a simple inflammation of a lymphatic gland, produced by irritation; the other is the result of the direct absorption of pus from the surface of the chancre, which is arrested in its progress by the ganglion nearest the seat of the chancre.

The glands involved in either case are always the superficial. Symptomatic or non-specific adenitis may be developed at any time during the progress of a soft chancre, but usually its appearance is immediately preceded by the chancre's taking on an inflammatory character. It may terminate in resolution, or it may suppurate, and its diagnostic characteristics are—that it is slow in its development, and unattended with pain; the gland enlarges, but presents little disposition to suppurate; it is soft; the integument over it is freely movable; if suppuration occurs, it is indolent in its character, and the pus furnished will not produce a chancre by inoculation—in a word, in its main features, it closely resembles ordinary strumous adenitis.

Specific or virulent adenitis depends upon the presence of virulent pus in the meshes of the glands; in fact, it is a chancre of the gland, and on account of the presence of the chancrous virus, suppuration and entire destruction of the gland is inevitable. As a rule, but a single gland is involved, and the prominent facts in regard to this form of adenitis are, that the gland enlarges rapidly, is painful and tender from the commencement; its progress is rapid, involving the tissues

around the gland; it suppurates and opens spontaneously, early furnishing inoculable pus, and is liable to all the accidents to which a soft chancre is subject. I have thus briefly noticed the main features of these two varieties of adenitis, in order that I might the more clearly speak of their treatment.

About eighteen months since, entering upon my term of service at the Island Hospital, I was astonished at the large number of what were termed chronic buboes in my wards. After a careful examination of each individual case, I found that a large proportion presented evidences of having been specific in character, and some of these, although they had existed five and six months, still furnished inoculable pus. Others, with histories and appearances indicating their non-virulent character, under a series of poultices, had formed sinuses in a mass of indurated ganglia that had been discharging (the patient being almost constantly in a recumbent posture) for six and twelve months.

The best method to be pursued in the management of these affections of the ganglia, especially at their commencement, has been a practical study with me since that time.

On consulting authorities, I found that all who recognized the wide differences between the infecting and non-infecting chancre, also made a distinction between virulent and non-virulent adenitis as a complication of non-infecting (or soft) chancres; and that while all admitted that in non-virulent adenitis suppuration ought to be avoided, in virulent it was a necessity; but in relation to the best mode of procedure in order to avoid it in the one case, and to terminate it in the other, there was a decided difference of opinion.

In considering the treatment of these affections of the ganglia, I shall not enter into a detailed account of the various methods of procedure that have been recommended by different writers upon this subject, but briefly describe those which, after an impartial trial, I have found most efficacious.

In the management of non-virulent adenitis, the most important point is to prevent suppuration. This may be accomplished in the majority of instances by compression; if tenderness of the glands prevent the immediate application of the compress, apply the saturated tinct. of aconite for a few hours; then apply firmly by means of a spica bandage a hard pad of sufficient size and shape to press evenly over the whole of the gland involved. Enjoin absolute rest and a non-stimulating diet. Subdue the inflammatory condition of the chancre (which is usually present) by opiate lotions, and at the end of a week, usually, the adenitis will be arrested.

If suppuration has already occurred, open the abscess by a crucial incision at its lower border; fill the cavity with lint, over which apply compressed sponge by means of a spica bandage, which for a few days must be kept wet with tepid water, (changing the dressing each day.) As soon as the tenderness in the part has disappeared, apply the hard pad in such a manner that the pressure will be made from above downward; in two or three weeks the recovery will be complete. If the internal use of tonics is indicated, the ferri iodidum is preferred.

In the treatment of virulent or specific adenitis, it must be remembered that suppuration and the entire destruction of the gland are inevitable, and that before resolution can take place its entire removal must be accomplished, either by a slow suppurative process, or by surgical interference.

As soon as the character of the adenitis is determined, (which, by the rules before stated in most cases, can be done early,) the suppurative process should be hastened by poultices. When the integument over the gland becomes thin and shiny, with a scalpel remove an elliptical portion of the integument of sufficient size to expose the surface of the gland; in many cases the gland will be found isolated from the surrounding tissues by the suppurative process, and attached (as it were) only by a pedicle at its base, in which case it is easily removed with the finger or handle of the scalpel; at other times its removal will be found more difficult, and sometimes it will be found necessary to remove it in separate portions by means of ligatures; but in any event, the entire gland involved should be removed. When this is carefully done, a simple ulcer remains, which heals by granulation with amazing rapidity; and we have accomplished in a few weeks what otherwise often involves months. Before exsecting a gland in the manner described, the character of the adenitis should be accurately determined; and unless its virulence has been decided by a chancre resulting from the inoculation of the pus furnished by the gland involved, it should not be attempted. The removal of a gland in non-virulent adenitis greatly complicates the case, and I have seen very troublesome sinuses result from exsecting glands. Where this mistake had been made, not unfrequently the ulcer remaining after the removal of a gland assumes a chancreous character, when it should be treated in every way like a soft chancre. Every case of adenitis complicating non-virulent chancre that has come under my observation the past year, in which the principles of treatment above detailed have been rigidly followed, (where no syphilitic taint was present,) complete recovery has resulted within three months from the com-

mencement of the adenitis, and in the majority of cases within four weeks.

(To be continued.)

Fermentation as a Cause of Disease. By M. POLLI, of Milan.

The chemists, who have lately studied with the greatest success the phenomena of fermentation, have observed that this process has an importance much greater than could have been imagined. In fact, it is by fermentation that we explain the spontaneous decompositions of vegetable and animal tissues, such as dry putrefaction, eremacausis, gangrene, &c., and the whole series of successive transformations which organic substances undergo until they are converted into water, carbonic acid, ammonia, and inorganic substances. In consequence of fermentation, fatty bodies furnish us glycerine, salicine, and glucose; myronate of potassa is converted into the essential oil of mustard; neutral substances, such as urea and allantoin, evolve ammonia; and amygdalin produces the poisonous substances, essential oil of bitter almonds, and prussic acid.

Ferments act either by contact or *catalysis*. They are sometimes living beings, and sometimes very active substances, which are not even organized. Diastase, emulsin, pepsin, play the part of ferments. They can split up, (*dédoubler*,) hydrate, or render isomeric organic substances.

There is a great analogy between the processes of fermentation and some of the organic metamorphoses which preside over certain maladies. Given an albuminoid substance, which, in a particular stage of change, will act as a ferment, and particular substances, which are the results of such action, and here is the foundation of the humoral theory explained by well-studied chemical facts.*

But analogy is not sufficient; it has been demonstrated by experiments thoroughly made, that the blood experiences, in certain diseases, alterations and variations in its composition, and that we may produce an artificial disease which will present a wonderful resemblance to natural diseases, by injecting into the blood-vessels substances capable

* According to Pasteur, the ferment is not an albuminous substance altered by oxygen, but an organized being, whose germ exists in the air. The presence of albuminous matters is an indispensable condition of all fermentation, because the ferment needs such substances for its development.

of acting as ferments. The numerous abscesses produced by the injection of pus into the veins of dogs; the septic affections caused by the injection of putrid purulent substances into the veins of animals; the diseases, presenting all the characteristics of typhoid fever which can be provoked, by the injection of putrefied blood into the circulation; in fine, contagious diseases, such as glanders, which are produced by the admission of an infecting substance;—these are facts which prove that one can produce a constitutional affection by the simple introduction into the blood of a substance capable of playing the part of a ferment. There are some diseases proceeding from a morbid ferment which might be styled *catalytic* diseases, in which the morbid matter, producing metamorphoses from contact with the alterable principles of the blood, is the first cause of all the symptoms which the animal economy presents. Finally, it is not possible to deny that fermentation may be produced in the blood.

But admitting as an initial point, in many diseases, the action of a specific ferment in the blood, is it possible to prevent its effects, to render it inactive in the living body, as we can by means of many chemical agents outside of the organism? This is the principal point which gives interest to this pathological question.

M. Polli thinks that he has shown, by a series of facts and conclusive experiments, that it is possible to neutralize morbid ferments in the blood of animals by chemical substances, which will not alter the blood so much as to be incompatible with life, and that it is through the employment of such substances that one may hope to treat successfully all diseases whose primary cause is fermentation.

We know that sulphurous acid gas prevents alcoholic and acetic fermentations, and that it is also an obstacle to the fermentation of animal substances, and of all organic substances in general. Thus it arrests, even after the commencement of the process, the fermentation which the saliva and diastase produce when brought into contact with starch, that which myronin determines in the paste of black mustard, that which emulsin produces in the amygdalin of bitter almonds, etc.

M. Polli has discovered that the alkaline and earthy sulphites enjoy the same antiseptic and decolorizing properties. This fact is very important, since it allows of the employment of sulphurous acid in therapeutics. He believes that he has also discovered that the action of sulphurous acid and the sulphites on coloring matters, as well as on ferments, is not a deoxygenating process, nor a combination, nor a destructive process, but simply a molecular modification.

This *modus operandi* of sulphurous acid and the sulphites would give a suitable explanation of the precious property possessed by these chemical preparations, of preventing or energetically arresting the action of morbid ferments artificially introduced into the blood of animals without altering the composition of the latter in such a manner as to be incompatible with life.

Polli, after a large number of experiments on dogs, has determined the dose of the sulphites which can be internally administered, the metamorphoses these undergo in the organism, and their curative action in affections produced by the injection of putrid or contagious matters into the blood.

1. Ten grammes of sulphite of soda were given to a dog during five days; then a drachm of pus was injected into the femoral vein. The animal appeared sad, and refused the food which was offered it, but on the next day it regained its liveliness and ate voluntarily. Two days afterwards the same experiment was commenced, with the same results. At the end of some days the animal was perfectly cured.

2. On two occasions a gramme of pus was injected into the veins of another dog more robust than the preceding. The animal was sad; the next day it took food; the day following it was dejected, the respiration difficult, the wounds were sanious, the left leg and foot became swollen, and it died ten days afterwards.

3. An equal quantity of putrid blood was injected into the veins of three dogs; one died five hours after the injection, another after five days of sickness, and the third, who had taken sulphite of soda, experienced no uneasiness, and was cured rapidly.

4. A large number of other experiments, made with putrid blood and the mucus of glanders, showed that the animals died with all the symptoms of general infection whenever they were not treated with sulphite of soda, and that they were saved whenever they were put under the influence of this medicament.

If these facts should be confirmed by other experiments, M. Polli will have rendered an immense service to therapeutics, and will have cast some light on the cause—as yet so obscure—of a large number of diseases.—(*Jour. de Phar. et de Chim.*)

L. H. S.

Transactions of the Medical Society of the County of Kings.

AUGUST, 1861.

Dr. JONES read the following case:

James Dolan, aged 18 years, residing in Bolivar Street, Brooklyn, was struck with a stone, thrown by a negro boy, on the lower jaw, in the summer of 1854, causing him to fall senseless; in which condition he remained until after his arrival at home, to which he was carried, a period of perhaps half an hour. His face was much swollen at this time, and although the swelling somewhat diminished at first, it never entirely disappeared, but rather slowly, after about one year, increased, and was very extensively enlarged at the time he came under my charge, in January, 1859. He was quite delirious for several days immediately after the occurrence of the injury.

He had been attended by several physicians both in and out of the hospital, and had been treated by domestic remedies and quack preparations without limit—even those prescribed by the seventh son of a seventh child.

In January of 1859, I found him much emaciated; his head forced over to the left shoulder by the enlargement of the right side of the face and neck; several sinuses were established along the body, and one very large one at the angle of the jaw; the discharge therefrom being ichorous, foetid, and excoriating the surface whenever it came into contact with it; some of his teeth on the affected side had fallen out, and all were loose, which, with some difficulty owing to his inability to open his mouth more than a quarter of an inch, were extracted. Cicatrices had produced considerable deformity about the neck; his bowels were irregular; appetite variable; tongue loaded; sordes on the teeth; and, from symptoms present, he was evidently suffering from constitutional irritation.

After carefully examining the case, I concluded that a large portion of the left jaw was necrosed, and that caries existed to such an extent, that unless arrested, the entire jaw would be lost, unless death would anticipate such an event.

The patient was therefore placed under constitutional treatment, for the purpose of preparing him for an explorative operation.

On the 14th of February, three weeks from the time I first saw him, I deemed it expedient to proceed with the operation. I was very kindly and efficiently assisted by Andrew Otterson, M.D., A. T. Pearsall, and R. M. Deering, my students, and Mr. Wheeler.

The patient was placed under an anæsthetic, consisting of two

parts of sulphuric ether and one of chloroform, and the operation commenced by making an incision along the base of the jaw, from its angle to the canine tooth, in a circular direction, down to the bone. The soft parts were then carefully separated from the bone on all sides; in some places they were loose, and others firmly attached; perforations had taken place in several parts of the bone, corresponding to the sinuses in the soft parts.

The walls of the body of the bone were very thin; in some places soft, in others brittle.

The incision was continued from the angle, along the ramus, to the articulation; nearly the entire ramus, with its condyle, being necrosed. I deemed it advisable, under the circumstances, to disarticulate and remove the entire diseased portion of the jaw, which extended from the canine tooth on the right side up to and including the condyle; and as the coronoid process could not be seen without unwarrantable cutting, to ascertain its condition, it was also included, but found, after removal, to be in a healthy condition.

After detaching the soft parts, preserving the periosteum, I sawed through part of the body of the bone, and with Liston's bone forceps cut the balance about opposite to the canine tooth; then everted and depressed the ramus, and disarticulated it. The edges of the perforations in the periosteum were carefully trimmed; the entire cavity thoroughly cleansed; the edges of the wound were brought together by sutures, rather loosely applied, and adhesive plaster. The patient was placed under the influence of opium, and cold-water dressing applied. Union by first intention took place, in several places, along the line of incision, although there was considerable tumefaction, sufficient to tear out the sutures from the inferior margin of the wound, in less than twenty-four hours. Both eyes were closed for about forty hours. The swelling then gradually diminished, but did not disappear for at least two months; after which, I did not see the patient until July, 1861.

The sinuses were thoroughly cleansed at the time of the operation, lint pledgets inserted into them after the lapse of about one week, and as soon as reparative action was evinced, they were discontinued.

The case progressed rapidly and favorably; he was confined to his bed about one week, walked out at the end of two, and was enabled to go to work in about one month's time.

I am of the opinion that this disease was caused by the blow from the stone thrown by the negro boy; the injury done by this violence produced an inflammation of the periosteum, medullary tissue and

bone, and that caries of the bone was the consequence; this caries being associated with, and followed by, necrosis.

Nature has been very kind and conservative in this case. Since the operation she has thrown out a substance of a bony-like consistence, as a substitute for that part of the jaw removed; the form has been remarkably preserved, and the contour of the face very little altered.

I present the patient for your examination. The removed part of the jaw lies on the table for your inspection.

Dr. J. G. JOHNSON stated that Dr. Jones's case was interesting, as showing the readiness with which new bone was formed in children, where the necrosed portion had been removed and the periosteum left. At the April meeting of this Society, Dr. Johnson had presented a case where complete and rapid restoration of the bone had followed the removal of nearly one-half of the inferior maxilla for necrosis in a little girl of five years. Dr. E. S. Cooper, of San Francisco, had published a similar case in a child. It was well known that this reparative process would take place in the adult; but these cases were of interest from the readiness with which the reparative process takes place at a time when the ossific matter in the system is less than at more mature life, as well as from the slight causes which were sufficient to induce necrosis in the young subject.

Dr. JONES inquired whether this new material was really bone. Dr. ENOS thought it was. It is well established that the various parts of the bone produce bone; thus, not only the periosteum, but the endosteum and the medullary matter. French writers have shown that if the periosteum is raised from the bone and carried into the belly of a muscle, it will produce bone in its new situation. Dr. ENOS had repeated this experiment upon the femur of a rabbit, with like result. The soft parts will also, under certain circumstances, throw out ossific matter.

Dr. ENOS had a case where the fractured ends of a bone had been separated for more than an inch, and union had taken place where the new bone must have been thrown out by the muscles.

Dr. HAWLEY's singular case of paralysis, which has been heretofore mentioned, has entirely recovered, under the use of *tonics and electro-magnetism*.

Dr. NORTH reported a case of intermittent cholera morbus. The patient, a middle-aged married woman, not pregnant, was attacked every morning about seven o'clock with severe vomiting, purging, and great prostration, lasting from one to three hours, and then getting

better until the following morning; the paroxysms continued for some two weeks, in spite of opiates, astringents, antacids, and cathartics; when, upon the administration of quinine during the intervals, the attacks assumed the regular form of chills and fever, and then yielded entirely to the further use of the tonics.

Dr. NORTH stated, as his opinion, that it was a *rule* of obstetricians, that a pregnant woman, if attacked with the variolous disease, might be expected to abort, (or miscarry,) and cited two cases which had lately come under his notice of varioloid attacking pregnant women: one aborted five weeks after the varioloid, while the other was an exception to the rule, and went her time.

Dr. SMITH thought *facts* would not establish any such rule, thinking it doubtful whether, in the case mentioned by Dr. North, the abortion was caused by the variolous disease; believing, if such had been the case, the result would have followed the cause sooner; and that if the child had died as the result of the varioloid, five weeks before, it must have shown signs of disorganization and decay; stating, also, that he could then call to mind three cases where women pretty well advanced in pregnancy had passed through varioloid and passed on to confinement at full term, and he distinctly recollects revaccinating the children without effect.

Dr. HAWLEY mentioned the case of a patient of his, in which the uterus retained the placenta six full weeks after the expulsion of the foetus; that it was then thrown off, with contractions simulating regular labor. Not the least decomposition had taken place in the placenta.

Dr. BRADY reported two apparently *mild* cases of cholera infantum, which were rapidly fatal, from a complication of diphtheria. Dr. Brady related the history of a case of diphtheria, where the patient, a little boy, was taken with sudden coughing and choking, and a moderate amount of the peculiar deposit in the pharynx, enlargement of the glands, &c., which lasted for some five days, and then seemed to improve in the throat and proceed *downward*; and after a few days the patient began to expectorate, and the Dr. says he expectorated "*pints of matter daily*" for some three weeks, and finally recovered.

Several members stated their general mode of treatment for cholera infantum.

Dr. O. H. SMITH gave very little medicine internally, but depended more upon regulating the diet, giving, if possible, milk from one cow, diluted with one-half water, and sweetened with loaf sugar, *but did not allow the milk to be boiled*; sometimes used Borden's condensed

milk, one part to eight of water. His medicines were the usual absorbents and antacids, with rhatany as an astringent; and sometimes minute doses of Dover's powder. As a favorite *external* application, he directed a "*ginger paste*" to be applied to the abdomen, to remain long enough to produce a decided redness of the surface, and to be repeated often enough to keep up a gentle irritation and warmth of the skin. This, together with cool applications to the head, and *gin* as a stimulus, if stimulants were needed, and to have the child *much in the open air*, constituted the main points in a treatment with which he was very well satisfied.

Dr. BRADY followed a similar plan as to the cure of the patient and the general treatment; but when first called, to control the vomiting, he usually ordered a grain of calomel to be well rubbed up with 12 grs. of sugar, and divided in 6 powders, one to be given every four hours, *dry, upon the tongue*; if the discharges from the bowels were very frequent, he gave about $\frac{1}{2}$ of a grain of opium with the calomel; if the vomiting does not yield to the calomel, he gives (to a child a year old) about $\frac{1}{8}$ of a drop of hydrocyanic acid, with small doses of the Tr. opii. As an irritant to the bowels externally, Dr. Brady uses turpentine, with camphorated oil. A favorite nourishment is raw beef.

Dr. HAWLEY usually relies upon some form of an opiate for the discharges from the bowels, and creosote for the vomiting. General hygienic treatment the same as that just described.

Dr. NORTH had nothing peculiar in his treatment, unless it was bathing, or rather *rubbing*, the bowels often with a liniment made of equal parts of castor oil and laudanum, and keeping the abdomen warm with a flannel bandage.

REGULAR MEETING, SEPTEMBER, 1861.

Dr. HEUSER remarked that twelve days ago he vaccinated a girl 25 years of age. The vesicle developed well. She had been previously vaccinated in Germany, where a certificate must be shown when one enters school, or applies for confirmation, or is about to be married. Two days ago varioloid made its appearance. He had seen several cases of simultaneous appearance of vaccinia and variola.

Dr. HART, in 1828, vaccinated mother and two children in the same family. One of the children soon after had a mild attack of varioloid.

Dr. CONKLING vaccinated a child, small-pox being in the neighborhood. Four weeks after, the child died with the confluent disease.

Six months ago, another child vaccinated by him with the scab, had variola, but recovered.

Dr. BURGE related a case in which he vaccinated the same child nine times without effect, in several instances using fresh virus taken directly from the vesicle, and inserted without delay. Feeling sure that the child was not susceptible to the poison of the variolous disease, he assured the mother that he was as safe as though the vaccination had taken. The case occurred in New York. Moving thence to Brooklyn, the Doctor lost sight of the family for five years, when, meeting the mother casually, he asked after the little boy. "Oh!" said she, "he died of small-pox two years ago."

Dr. HEUSER remarked, that though the protection afforded by vaccination had been questioned in Germany, and the whole subject passed through a severe ordeal of public discussion, vaccinia as a prophylactic was now established by new and undoubted statistics.

Dr. HEUSER said he had recently been much annoyed by the grave character of a class of cases which had generally given him but little trouble. He had lost three nursing infants; one dying thirty-six hours, and another the third day after the attack commenced. Discharges loose; light colored; no blood; pain violent.

Dr. HART was called some weeks since to see a lady who had fallen down stairs, striking upon her head. There was blood oozing in considerable quantity from the left ear, and also an inch or two below the ear, a white matter, which he believed to be cerebral. Some of the same was also found mixed with blood upon the stairs. No fracture could be discovered; patient was unconscious; pulse 44; she died the same night. Dr. Hart thought a post-mortem would have been interesting in this case, to show whether a previously undiscoverable fracture really existed *above* the base of the skull. It was prevented by the summary proceedings of the coroner.

The subject of hæmorrhage from the ear, as a symptom of fracture at the base of the skull, was discussed, and the opinion generally expressed that it was in itself no evidence of such fracture.

Dr. CONKLING thought an exudation of serous fluid a certain symptom.

Dr. BURGE was called to see a lad 14 years of age, who had fallen eight feet, striking upon the vertex; was taken up insensible, and conveyed to his house, when consciousness gradually returned. Hæmorrhage from the right ear was rather profuse. No active treatment of any kind was instituted. Such directions only were given as relate to the general care of the patient, absence of noise, exclusion of strong

light, mild diet, &c. Recovery was rapid, and without an untoward symptom.

Dr. HART desired to know if the gentlemen had had any experience of the use of persulphate of iron in hæmoptysis. In one case he had ordered ten drops of the liquor every hour; hæmorrhage ceased after the first dose.

In hæmoptysis, Dr. CONKLING relied upon gallic acid, five to ten grains, every two to four hours; he had no confidence in lead and opium.

Dr. BURGE preferred Squibb's fluid extract of ergot to anything else he had used, or seen used. He knew nothing of its *modus operandi*, and would not claim that it was as efficacious in other hæmorrhages as in those from the uterus. In this connection, he spoke of a case of menorrhagia which had continued nearly six weeks, with no treatment except the domestic use of elixir vitriol, and *that* without the slightest benefit. He ordered Squibb's fluid extract of ergot, in half-drachm doses, three times a day, and in twenty-four hours the flow ceased entirely.

Dr. BALL said that among other means, he used with benefit creosote, in two-drop doses, three times a day, in flax-seed tea or gum-water.

Dr. CONKLING related briefly a case of confinement. When he first saw the patient, labor was in the second stage. She was very large, and much bloated. She suffered intensely in the region of the bladder. At her urgent request, chloroform was administered; none, however, was given during the last hour of parturition. The Doctor remained an hour after delivery. At the end of another hour he was recalled, when he found her in convulsions. Bled her twenty ounces—consciousness returned. Soon she seemed to be relapsing, when ether was administered by inhalation. Patient recovered rapidly.

Dr. CONKLING desired to predicate two questions upon this case:

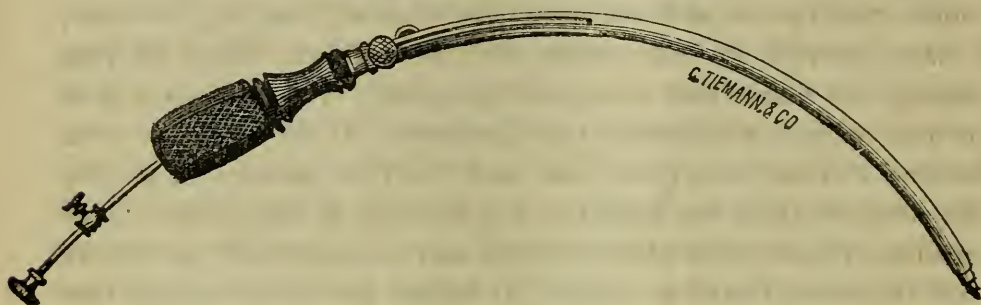
First. Had the patient been bled a week before, would it have lessened the liability to these convulsions? And

Second. Did the chloroform produce them?

Dilatation of Strictures in the Urethra, with a New Instrument. By J. H. HOBART BURGE, M.D.

Mr. President and Gentlemen—Some months ago I had the pleasure of presenting to this Society a new instrument for the dilatation of strictures in the urethra. Since then I have so much improved upon my own device, that I hope there is no presumption in bringing it

again to your especial notice. To render the subject intelligible to those members who were not present on the former occasion, I will repeat very concisely what I then said. Recognizing the danger of introducing very small instruments into the urethra, and the consequent importance of using the largest that will pass without violence, I attempted to show that in actual practice the greatest obstacle to success was to be found in the inefficiency of the mechanical means at our command; that, in order to decide what instrument was of the proper size to enter or pass the stricture, it was necessary to try successively several sizes, of course irritating the sensitive parts more and more at each introduction and withdrawal, or else, on the other hand, to select one so minute as to endanger the integrity of the mucous lining of the canal, and perhaps increase the difficulty we were called to relieve. It then became obvious that the great desideratum was an instrument which would enable us to feel our way safely from point to point, changing its size as occasion might require, without danger to any part, and obviating entirely the necessity of withdrawing it till the operation was completed. This was the problem which I proposed to myself, and the solution of it is in the instrument which I now exhibit. It consists of several concentric cylinders, curved in the



arc of a circle. The external or largest cylinder being about the size of No. 10 catheter, and the internal or smallest about the size of No. 2. The smaller sizes are all projected at will by means of the knobs near the handle. The design is to carry the instrument *in full size* to the point of stricture. The moment the obstruction is felt, the largest of the *contained* cylinders is to be advanced till it in turn meets with some obstruction, when, in like manner, the next size must be pushed forward, and so on, always from *larger* to *smaller*, till the stricture is passed. To prevent misapprehension, I contrasted this instrument with that of Whakely, which consists of a style and several separate cylinders; the design being, first, to introduce the style, and then, successively, the cylinders upon the style, always proceeding from *smaller* to *larger*; which instrument, though it possesses some

advantages over the ordinary bougies, inasmuch as it obviates the necessity of frequent introduction and withdrawal, is practically the exact opposite of mine, and involves all the danger of injury to the passage which attends the use of a fine instrument with nothing to guide it in the way it should go. To be sure, the style once introduced is a sure guide to the cylinders sliding thereon; but the difficulty consists in safely introducing the style, which of necessity is very small. It is clear to my mind, that even in those cases in which recourse must be had to the finest instruments ever used, there is great advantage in gently dilating the canal all the way down to the stricture, and especially just where the contraction begins, thus removing any folds of membrane which might otherwise engage the point of your instrument. By the larger cylinders of this multiple bougie, this dilatation is effected and maintained, while the smaller are safely guided by them in the proper direction. When I first asked your attention to this instrument, a style occupied its centre, and filled completely the smallest of these cylinders. *That* I have caused to be removed, and a bore to be made in the handle continuous with the canal thus formed, so that when the stricture is passed, the patient may have instant relief from a distended bladder. Lest the smallest of these cylinders should prove, as it sometimes doubtless will, too large to enter, I have provided an independent style of sufficient length to pass through the handle and emerge at the point. This, of course, is to be used without withdrawing the instrument. If the use of the style become necessary in a given case, and with it we succeed in passing the stricture, there can hardly be any difficulty in sliding upon it the smallest cylinder, after which the style may be immediately withdrawn and the urine allowed to escape. It will at once occur to you that many strictures occasion a tortuosity of the urethra, and that a firm metallic bougie cannot be made to follow these unnatural windings. To obviate this difficulty, I have suggested to Messrs. Tiemann & Co. to provide with each instrument some long, flexible bougies, small enough to enter the bore of this.

Some may ask, if we must resort to a flexible instrument, why not do so without the intervention of the metallic? I answer, because the metallic acts as a *sure* guide down to the very seat of the difficulty, and keeps all folds of mucous membrane from obstructing and turning back the point of the flexible. There is but one more division of my subject which I propose to mention, and you will excuse me for introducing it with words of warning.

Cases of stricture do occur in which all simple means of relief fail,

though I believe the patience of a patient man should be exhausted before the more heroic measures are adopted. If, then, after faithful and ineffectual trial of all means, both local and general, the surgeon deem it advisable to divide the stricture, I have made provision for that necessity in this instrument. A second style is furnished, in size and length corresponding to that already described, and differing from it only in having a cutting extremity. This is to be introduced through the handle, while the main instrument is held as a guide to the strictured part. God forbid that I should recommend any measure so fraught with danger as this, without throwing around it all possible safeguards. Let it, then, be distinctly understood, that this is to be held in reserve for extreme cases, and always as a *dernier ressort*, and that the part to be divided is to be first fairly reached by advancing the cylinders from larger to smaller, as already described; and lastly, that the operator decide in advance how far his incision shall extend, and gauge his instrument accordingly, by means of the revolving nut arranged for that purpose upon the handle.

Having been informed that Drs. Alexander B. Mott and George T. Elliot, Jr., were using this instrument for the cervix uteri, thereby giving it a wider range of usefulness than I had anticipated for it, I addressed a note to each, asking the result of his experience. From Dr. Mott I have not yet received an answer. Dr. Elliot writes as follows: "It affords me great pleasure to say that I have found it useful as a dilator of the uterine cervix. In one case of dysmenorrhœa its effects were very happy indeed."

This instrument is manufactured and sold by George Tiemann & Co., 63 Chatham Street, New York, who will furnish a shorter variety expressly for the cervix uteri.

Dr. JOHN G. JOHNSON stated that this modification of Dr. Burge's apparatus would prove extremely valuable, not only in the way Dr. Burge had mentioned, but also in another way.

Dr. JOHNSON stated that he was called to a case a few nights since, where a man was suffering from retention of the urine. There had been an old stricture of the urethra, and this was complicated by false passages running in every direction. The patient had been for some time a patient of Guy's Hospital, and a No. 2 was the largest instrument that could be introduced whilst the patient was in the hospital. With the irritation that existed it was impossible to find the urethra. After the patience of three patient and persevering physicians had been exhausted, it was concluded to puncture the bladder. Examination per rectum showed the prostate much enlarged, and no trocar

was long enough to reach above it. Accordingly, the operation was performed above the pubes. The patient recovered without any drawback. Had Dr. Burge's improvement then been known, it would have furnished an admirable *trocar* and catheter for the puncture of the bladder per rectum.

Dr. JOHNSON would recommend the improvement as admirably serving where *per rectum* puncture of the bladder is necessary in cases of retention of the urine.

QUARTERLY REPORTS ON MEDICAL PROGRESS.

REPORT ON SURGERY.

By J. J. HULL, M.D.

1. *Free Openings into Suppurating Joints.* By Prof. E. S. COOPER. (San Francisco Medical Press, January, 1862.)
2. *A Case of Amputation of the Leg successfully treated without Ligating the Arteries.* Reported by Dr. H. RISTINE. (Chicago Medical Journal, March, 1862.)
3. *A Case in which Artificial Teeth were Lodged between the Tongue and Epiglottis.* Reported by JAMES PAGET. (London Medical Times and Gazette, January 18, 1862.)
4. *On the Return of Pulsations in Aneurisms after the Ligature.* (Gazette des Hôpitaux, from Medico-Chirurgical Review, January, 1862.)
5. *Polypus of the Rectum.* (London Medical Times and Gazette, February 8, 1862.)
6. *Hospital Phagadema Cured by the Submersion Treatment.* Reported by W. HUTCHINSON. (Ibid., January 4th, 1862.)
7. *On the Radical Cure of Varicocele by Subcutaneous Ligature of the Spermatic Veins.* By JOLLIFFE TUFFNELL. (Dublin Quarterly Journal.)
8. *A New Operation in Hernia.* By Dr. PANCOAST, Pennsylvania Hospital. (Philadelphia Medical and Surgical Reporter, March 29, 1862.)
9. *A New Splint for Fractures of the Wrist and Hand.* By Dr. J. E. GARRETSON. (Ibid., April 19th, 1862.)
10. *Congenital Inversion of the Bladder.* By JOHN LOWE, M.D. (London Lancet, American Edition, May, 1862.)

1. Dr. Cooper has of late written much on the importance of free openings into suppurating joints. In the January number of his journal he says: "We do not claim to be the first who opened joints in a state of suppuration. There are several cases reported in standard medical works upon surgery, but we know of no standard work in

which the practice is recommended as a rule. The cases mentioned were generally regarded by the writers as exceptional cases. Whereas, we believe that in *all* cases where purulent matter is found to any considerable extent in a joint, it should be discharged by a free incision, if such an operation would be proper in the patient who has burrowing of matter in any other part of the body, and that the operation is more imperatively demanded in the former than in the latter case; and further, that the more complicated the joint, (such as the knee,) the more the operation is demanded early. The time will come when the profession will confidently expect a cure in such case, with a complete restoration of mobility. The reason why it does not generally occur now is, a faulty system of treatment is in vogue. If, instead of permitting purulent matter to remain pent up in the joint cavity, producing absorption of the tissues and general disorganization, the surgeon would treat the abscess (for it is nothing else) upon rational principles, the results of these cases would be altogether different. The parts should be fully laid open, and every drop of purulent matter evacuated, as is done in other purulent accumulations. Not only this, but the wound should be kept open for the discharge of all that forms subsequently. We are constantly practicing this, and scarcely ever fail in securing a speedy recovery. Probably medical journalists have been led into the opinion that we urged an exclusive claim to this practice, in consequence of our articles upon the subject being generally accompanied with remarks in regard to the innocuousness of atmosphere admitted into the joints. Upon this subject we do claim priority. So far as we know, there is not another writer, either as a standard author or contributor to a medical journal, who claims to have any convincing proofs that atmosphere admitted into joints or other tissues is not generally a source of danger; on the other hand, they all urge, when dwelling upon the subject, that it is a most unfortunate, if not even dangerous, occurrence. So far as the interests of the profession are concerned, the subject of priority is a small matter in comparison with the importance of the practice in question, and we consider it the duty of all practitioners to report the results of their cases, because the profession have not universally, or even generally, adopted it as yet. We hold that a practitioner owes no greater obligation to the medical world than that of reporting his more important cases. And upon this subject we would solicit communications and the reports of cases from practitioners."

2. In this communication is related the case of a little girl, (age not given,) who, while playing in a meadow, was accidentally run

over by a mowing machine, the scythe of which entirely severed her leg about an inch above the ankle-joint. Dr. R. was at once sent for, and on arriving, three or four hours after, found her quietly sleeping, without a particle of hæmorrhage, and with a good strong circulation. He was told she had bled freely immediately after the injury, but it ceased on her being brought to the house, a few hundred yards distant. Amputation being necessary, an assistant was sent for, and on his arrival, seven or eight hours after the accident, she was placed under the influence of chloroform, and the circular operation was performed. There not being a sufficient amount of hæmorrhage to enable the operator to find the vessels, pressure was removed from the femoral artery, which had been compressed during the operation, but the arteries still refused to bleed a single drop. After removing everything that could possibly interfere with the circulation in the limb, the result remained the same. The temperature of the limb up to the time of the operation was natural. She was allowed to recover from the chloroform, and the stump was exposed to the influence of the air for an hour, there being no bleeding. Warm applications were resorted to, and continued perseveringly for at least four hours, during which time *not five drops of blood* oozed from the stump. All remedies having been exhausted to bring about a flow of blood, at least sufficient to enable the arteries to be found, without success, patient was again placed under the influence of chloroform, and the stump dressed in the usual manner, the arteries being left to care for themselves, taking the risk of their bleeding. On the fourth day the stump was dressed, up to which time there had been no discharge of any kind sufficient to discolor the dressing in the least. The stump healed kindly, with very little constitutional disturbance, discharging about the usual amount of pus during the healing process. The writer thinks the absence of hæmorrhage was entirely due to the retraction of the vessels, and not, as some suggested, to the formation of coagula, which he says must have been to the extent of nearly four inches, to have prevented a renewal of bleeding after the operation.

3. The following case seems worthy to be added to the records of foreign bodies found in places where they were least likely to be, and producing symptoms very similar to those of organic disease:

“In July a gentleman, sixty years old, after being engaged all day in more than usually fatiguing business, and exposed to cold air, felt faint and ill in the evening, and went to his bedroom at the hotel in which he was staying. While lying down, faint, or, perhaps, in the beginning of a slight epileptic seizure, he asked the servant to take

out for him his artificial teeth—nearly complete separate sets for the upper and lower jaws. The servant, he believed, took them out. Of what immediately followed he could remember nothing, more than that he became much more ill, with difficulty of breathing, and a sense of choking and suffocation, in which, in great anxiety and alarm, he sent for medical help. He was found suffering with much difficulty of swallowing, and some dyspnœa.

“His tonsils appeared much enlarged, and unusually red. These symptoms were treated, and in some measure relieved; and when one set of his teeth were missed on the day after the beginning of his illness, his medical attendants, who suspected that they might have been swallowed, were begged not to speak of them to him, for fear of the excitement and alarm that such a suspicion might excite in him. All the severity of his symptoms being subdued, in a few days the patient returned to his house at Rhyl, where Mr. Theed, as usual, attended him. For the first few days Mr. Theed saw appearances of slight inflammation of the fauces, but these soon subsided; from that time nothing morbid could be seen in his throat. He had considerable and increasing difficulty of swallowing; was obliged to drink very slowly, and to cut all his solid food into very small fragments, and force them down his throat with gulping. Occasionally he was almost choked by food becoming involved in a tenacious mucus, which appeared to be secreted in large quantity at and beyond the fauces. Occasionally, also, he vomited after taking food. He had frequent short, “hacking” cough; and once or twice hawked up a little blood. He suffered no considerable pain, but felt constriction about his cricoid cartilage, and always referred to that part as the seat of obstruction hindering his swallowing. His voice was rough, and rather hissing; his breathing sometimes wheezing.

“Many times, while watching these symptoms, Mr. Theed suspected that they were due to some foreign body in or near the larynx; but he could see none; and the patient, as often as inquiries were directed to this point, declared somewhat impatiently that the thing could not be. Especially when with the tardily given permission of his relatives he was asked if the false teeth, which he had lost on the night of his illness, might not have slipped into his throat, he maintained that it was quite impossible; for what he had lost was a whole upper set, which, he believed, had been unluckily thrown away with the water into which they were put at night. The piece was far too big, he said, to go into his throat, or to be there without his knowing it. However, as none of his symptoms diminished, and he was

becoming very thin and feeble, Mr. Theed in November brought him to London for consultation. His feeble appearance, his dull, pale face, his emaciation, and the recital of his case, made me fully expect that he had cancerous stricture of the upper part of his œsophagus. On examining his mouth and fauces, I could see nothing unnatural, till, on extremely depressing the back of the tongue, I saw something white near his epiglottis, but too obscurely to guess what it was. Passing my finger to the side of the epiglottis, I felt teeth there, and soon hooked out the whole lost set, with their gold palate-plate and other fittings.

"The piece lay between the base of the tongue and the epiglottis, very closely fitted to all the surface on which it rested. The teeth were directed upward, and I believe the incisor teeth were next to the epiglottis, and the notch in the palate-plate next to the root of the tongue.

"The most remarkable point of this case, next to the fact of the patient being unconscious for more than three months of what he had in his fauces, is, that a thing so large could be out of sight at the root of the tongue. It may be well, therefore, to repeat that it was completely invisible, except when the base of the tongue was exceedingly depressed, and even then only a small part of it was obscurely seen. To this, and to the patient's dread of any other examination than that with the eye, it must be ascribed that the lost teeth were not discovered long before I saw him.

"It may be worth notice that the patient referred to the parts about the cricoid cartilage as the place of obstruction in swallowing. This may be an instance of transference of morbid sensation, similar to that by which the irritation that excites coughing, wherever its true seat may be, is felt as if it were at the top of the larynx. A similar deceptive transference of sensation was observed in a lady whom I saw with what I supposed to be cancerous stricture of the upper boundary of the œsophagus. She always pointed to the cricoid cartilage as the place of obstruction; but her disease proved to be a cancerous ulcer of the tongue, immediately in front of the epiglottis, and her pharynx and œsophagus were healthy.

"Since the removal of the displaced teeth the patient has regained health, and Mr. Theed's last report of him is, 'I think him as well as before the accident.'

"P. S.—Since this narrative was in print, Mr. Theed has written that the patient has had 'a very severe attack of epilepsy, which lasted for five or six hours, during which time the convulsions were

so violent that if I had not removed (though with great difficulty) his full set of teeth, he would have inevitably broken them into pieces.' This, I think, elucidates the previous mystery."

4. "During a discussion on aneurism at the Society of Surgery, M. Broca observed, that the return of pulsation may depend upon three different causes: the persistence of the pulsations, return of the pulsations, and relapse of the aneurism. In the first of these cases, it is due to the presence of a somewhat large collateral vessel very near the aneurismal sac. The pulsation soon appears, but the cure of the disease is not prevented. In the second case, when the pulsations return, the sac is suddenly filled with coagula, which have not had time to become organized, and these 'passive' coagula are gradually dissolved, the arterial pulsations then reappearing. They appear soon after the operation, and may persist for one, two, three months, or more. At last, these first coagula are replaced by 'active' coagula, and a cure is produced in almost all cases. When relapse is to happen, the pulsations do not reappear so soon as in the preceding case; not occurring until one, two, or six months, or even from one to three years, after the ligature. At one of these remote periods, the blood has made a passage into the sac, and having hollowed out a more or less spacious cavity, the tumor takes on again the characters of an aneurism. Under all the above circumstances, more or less circumscribed pulsations are perceived in an aneurism for which an operation has been performed, but the prognosis is very different. In the first two cases no surgical treatment is called for, while that of relapse is a very serious one.

"M. Broca gave an account of the various cases he had collected exemplifying these occurrences. These do not comprise mere persistence of the pulsations after the application of the ligature, as, owing to the circulation being rendered slower, the deposition of fibrin goes on gradually and regularly until a cure is accomplished. They relate only to the cases in which the aneurismal tumor, after having been filled with coagula, at the end of a certain time again becomes permeable; and these, as stated above, may consist of instances of *return of pulsation* and *relapse, properly so called*. Cases of return of the pulsation are distinguished from those of relapse, by the fact that the tumor makes no progress; its pulsations, always more feeble than before the ligature, acquiring their maximum of intensity in a few hours, and then diminishing in force. Of 26 cases collected from various sources by M. Broca, 13 were aneurisms treated by ligature of the femoral, 4 of the external iliac, 6 of the primary carotid, 1 of the

subclavian, and 2 of the radial. In 5 of the cases, the pulsations reappeared before the end of the first day, eight times from the third to the seventh day, four times from the eighth to the fifteenth day, once on the nineteenth day, and once at the end of the seventh week; in this case only continuing during one day. None of these patients became the subjects of gangrene. One died from phlebitis, the ligature having perforated the femoral vein; and another in consequence of secondary hæmorrhage from the wound made for the ligature. All the other 24 cases survived, and all were radically cured, with the exception of two, which went on to true relapse. Of *relapse*, properly so called, he has collected 22 examples; this manifesting itself in 7 towards the end of the first month, and in 13 after the end of the sixth month; the epoch not being exactly indicated in the two others. It is remarkable that in none of the cases completely known has the relapse occurred between the first and the sixth month. All the relapses occurring after the end of the sixth month related to aneurisms of the lower extremity. Six relapses occurred between six months and a year, 2 at the end of a year, 1 at the end of two years, 1 at the end of four years, 1 at the end of seven years, and 1 at the end of fifteen years. This class of cases is far more serious than the former; for although in three instances the aneurisms were cured spontaneously, or by means of slight treatment, and in two others they remained stationary for a long time, in all the rest their progress was much more alarming."

5. "Although surgical writers have always regarded this disease as a rare one, modern surgeons are now beginning to discover that such is not the case, and that examples are not infrequent among the out-patients of a Metropolitan Hospital. Mr. Bryant informs us, as the result of his experience, that the disease is by far the most common in children, and in those under two years of age; and the chief symptom by which the presence of the growth may be recognized is bleeding from the bowel. In adults, this surgeon affirms that the affection is comparatively of rare occurrence, the experience of Guy's Hospital certainly well supporting this assertion. We give the following case as one amongst the most recent which have taken place in Mr. Bryant's practice: Francis D., a boy, aged 10 years, was brought by his mother to Mr. Bryant on January 10th, for hæmorrhage from the bowels. The bleeding had appeared at times for one year, but for the last three months it had been very constant and profuse: it came on, however, only when at stool. Upon making an examination with the finger, a polypus, the size of a large nut, was

detached and hooked down; a ligature was applied to its pedicle, and on the third day the growth came off. No bleeding followed, and convalescence was speedily established."

6. In October last, I had occasion to excise the elbow-joint, on account of destructive inflammation, which had followed an injury, with laceration, near the olecranon. The patient was a man of nearly thirty years of age, and of feeble constitution. After the operation, everything went on extremely well for a fortnight, when the wound was nearly healed. Acute hospital phagedæna, which was at the time prevalent in our wards, now attacked the two or three small sinuses which remained, and rapidly spread. In spite of the free use of strong nitric acid, and of the permanganate of potash lotion, with suitable constitutional treatment, the phagedæna advanced, till it had destroyed a large part of the integument at the back of the joint, and it seemed very questionable whether we should save the arm. Fuming nitric acid had been three times applied, and the ulnar nerve had been destroyed. I now determined to try the submersion plan, one not unfrequently adopted in some of the German hospitals. The entire arm was placed in a large tin bath, being rested upon a pillow, which was laid in the water. The water was kept comfortably warm, and frequently changed. The man being propped up in the half-reclining position, did not find the position irksome. The advantage was most immediate and most marked. In three days the sore was clean, and in six it was covered with florid granulations, and healing rapidly. The constitutional treatment had throughout been the same, and there could be no doubt that the improvement was really due to the use of the bath. The latter was continued for about ten days, when, as healing was everywhere rapidly progressing, it was laid aside. No relapse of phagedæna occurred, and a very useful arm has been obtained, though, of course, with a large scar at the back of the new joint.

In any similar case, I should certainly incline to adopt this plan much earlier. The comfort afforded to the patient while the part is submerged is very great, and by completely washing away every particle of pus as soon as formed, it prevents the spread of the unhealthy action by contagion from the morbid secretion of the sore. Its principle of action is therefore the same as that of the irrigation method largely employed at Guy's Hospital in similar cases.

7. "The plan I advocate is simply an improvement upon Mons. Ricord's double ligature, by adding to the double loops for the inclosure of the veins a pair of *retracting guides*, by which the surgeon is

enabled to withdraw the compressing medium at any moment, thus holding, as it were, a check-string upon inflammation in his hand, producing an adhesive phlebitis, and stopping short of the suppurative form. With this latter view, I employ also fine iron wire as a substitute for the ligature of silk, metal being less irritating to the parts engaged. Before resorting to the plan which I am now about to advance, I had found that in each instance in which I had used Ricord's loops, suppuration in the scrotum occurred. Since employing the retracting guides, no such annoyance has taken place. The method, then, that I advocate, is the following: In any given case of varicocele that comes before me, I interrogate the individual, and ascertain whether any remedial means have as yet been adopted; and if not, I recommend palliative treatment, viz., attention to the bowels, so as to prevent by regularity of action any lodgment in the descending colon; the use of cold water sponging night and morning, to constrict the vessels and dartos of the scrotum, and a bag truss. I do not advocate the use of pressure to the dilated veins at the external abdominal ring by means of the spring truss, or the puckering in of the loose skin of the scrotum, and the confining it in a steel ring, as sometimes adopted—my experience being to the effect that these remedies only irritate the patient, and that they are both inferior in action to a well-fitting, common bag truss. If these simple measures fail, I employ the following proceeding, after satisfying myself of the non-existence of organic disease of the kidney:

“ I prescribe an aperient of the compound powder of jalap combined with calomel. I confine the individual to bed for a day, and then deligate the veins in the manner recommended by Ricord. An assistant separates and holds aside the vas deferens. The bundle of veins is then isolated, and taken up in a fold of the skin, the first loop of wire being carried behind the veins. A second loop of wire is then passed in the opposite direction, in front of the veins, through the same orifices as the first. The bundle of veins is thus included between the two loops, the free extremity of each wire being passed through the loop of the other. The wires are then drawn in opposite directions, until about as much of each loop remains projecting from the scrotum, and the amount of the projection of the loop made equal on either side. Two portions of iron wire are now taken, each four inches in length, and doubled in the middle as closely as possible. One of these is passed through either loop, and drawn to its centre. The ends are then twisted. These wires form the *retracting guides*, and give the surgeon the most complete control over the vessels of the

cord, enabling him at any moment he wishes to take the ligature from off the veins, and remove all source of irritation from within the scrotum. The main wires are now to be drawn upon equally and *forcibly* until the vessels of the cord are completely strangulated. This done, the ends of the wires are brought up and attached to a ratchet, and thereby kept tensely strained, or else twisted around the extremities of a piece of strong watch-spring, bent back into an arc, the effort of which to restore itself keeps up continuous tension upon the cord. With reference to the length of time it may be necessary to maintain this constriction in order to produce sufficient adhesive phlebitis, and yet avoid the suppurative form, this must entirely depend upon the constitution of the individual. The guides to the surgeon will be the density of the swelling of the veins below the ligature, between the epididymis and the wires; the feeling of firmness to the touch; and a slight blush upon the integuments of the scrotum.

"These symptoms will denote inflammation sufficient to produce obliteration of the venous trunks. The main wires are now to be cut across, and the ratchet or steel spring detached. This done, the figure of 8 loop encircling the veins is to be opened, by withdrawing the wires through the medium of the retracting guides. A little lead-wash to the scrotum, and rest upon the back in bed for a few days, completes the cure. The patient, before rising, should be fitted with a suspensory bandage to support the parts."

8. "This was the case of a man far advanced in life, who had just entered the hospital to place himself under surgical treatment for an incarcerated scrotal hernia. Efforts had been made by the usual appliances of warm bath, etherization, etc., to reduce it, but without avail. There were none of the extreme symptoms usually present in strangulated hernia, and the diagnosis was therefore made of incarcerated hernia with stricture at the external abdominal ring. An operation was decided upon, and the lecturer took occasion in his clinical remarks to speak of an entirely new operation, of which he believed he was the originator and the only surgeon who had performed it. It was the division of the stricture by subcutaneous incision, on essentially the same principle as that for division of the tendo-Achillis or the soleus muscle for the cure of talipes. He had performed this operation in several instances with the most satisfactory results, curing the patient in much less time than is required by the usual operation, in some cases requiring the patient to lay by only a day. But it is only applicable in those cases where the stricture is at the external ring, and this should always be borne in mind. The operation was

performed as follows: A grooved instrument was first introduced some distance below the stricture, passed under the skin and fascia, and into the external ring, so as to raise it upon its point; the director being kept entirely outside the sac. A common bistoury (though that instrument is too much bent at the point to be an appropriate one) was then *held firmly* with its back upon the grooved director through the integuments, just below the stricture. By rocking the handle of the bistoury backward, the point slid along the groove to the seat of the stricture, dividing it. Great care is necessary to avoid wounding the bowel, which lies very close to the knife, while if properly performed it is less dangerous than the ordinary operation. The hernia was then readily reduced, and a bandage and compress applied to prevent its return."

9. "The splint is simple in construction, costless, and readily made. It may be prepared for each special case, or the surgeon may be always provided with an assortment of varying sizes, from that suitable to a child to that for a laboring man. Splints should be made in pairs, for right and left hands. To prepare the splint, the hand and arm are laid upon a strip of thin board, on which a rude outline of the part is drawn. The splint is then shaped to this outline. On the portion of the splint representing the wrist and hand is poured a mixture of plaster of Paris at a proper consistence for receiving an impression. The fracture being adjusted, and the hand and wrist in a proper position, they are pressed into the plastic mass. Before the cast hardens it is shaped according to the indications of the case as the surgeon desires. If an assortment of splints is made, they will be shaped for the full support of parts, inclosing simply the hand, or the wrist and forearm. An advantage of keeping an assortment is having splints ready for the treatment of swollen or lacerated hands or wrists, where a closely fitting cast would not be suitable. A light roller bandage is simply applied to retain the splint in position, and the whole is supported in a sling." This splint is recommended for fractures of the metacarpal or phalangeal bones, and of the lower extremity of the radius, but a serious objection to its use in any case, as it seems to us, is the rigidity of the several joints that must be produced. An extensive hospital practice in the treatment of fractures of the lower end of the radius has led us to prefer the ordinary anterior and posterior splints, extending from the condyles of the humerus to the wrist, leaving the hand free, to all other methods as a surety against this unpleasant result.

10. "This affection is so rare that it is passed over in silence by

most authors of systematic works on surgery. The only recorded case which I have met with is that given by Mr. Crosse in the *British and Foreign Medical Review*, (Oct., 1846,) which is exceedingly interesting as showing the importance of careful diagnosis before attempting any operative measures on tumors of the genital parts in female children. In this instance, the patient, aged three years, had a tumor to which a surgeon was about to apply a ligature, when Mr. Crosse, who happened to be present, fortunately discovered an aperture which he found to be the ureter. The operation was of course postponed *sine die*. By firm pressure the inverted bladder was made to repass into its natural position, and consequently, the child was saved from an untimely death. The report goes on to say that the prolapse of the bladder did not subsequently return, and the patient grew up to womanhood with no other inconvenience than a constant incontinence of urine. The following report of a very similar case may be recorded, more especially as operative interference was here pursued with excellent results:

“M. A. H., aged two years and a half, a fine, healthy, but very irritable girl, was admitted into the West Norfolk and Lynn Hospital on the 10th of November, 1859. On examination, a vascular-looking tumor, about the size of a large Italian walnut, was found projecting between the external labia. When the little patient cried the tumor became more injected, and increased considerably in size; at the same time a gush of urine took place. On closer inspection, the mass was found to be seated at the orifice of the urethra. On making a little gentle pressure, the tumor receded under the figner, and presently disappeared altogether within the urethra, and the forefinger could be readily passed within the bladder. I had, therefore, no difficulty in diagnosing an inversion of the bladder. From the statement of the mother, it appeared that the child had been subject to incontinence of urine from its birth, and that from the time it was two or three days old a small substance had been observed to protrude during a fit of crying or straining. Each effort of this kind was followed by a flow of urine, and the child's condition was truly pitiable. The thighs and labia were much excoriated, and the latter, as well as being swollen and indurated, were covered with numerous pustules. Until the age of two years the tumor had receded as soon as the fit of straining was over, but latterly it constantly protruded more or less.

“After considering the various means which might afford a chance of improving this distressing condition, I resolved upon making use of the actual cautery, which seemed to me best adapted for narrowing the

calibre of the urethra, and thus preventing the descent of the bladder. Accordingly, after putting the patient under the influence of chloroform, and having replaced the bladder within the pelvis, where it was retained by two stout probes, which served to keep the canal patent, a female sound, heated to a white heat, was applied to the track of the urethra. A small curved catheter with a bulbous extremity, which had been previously made by my direction, was then introduced and fastened in, and the patient put to bed. No constitutional symptoms followed, but there was considerable pain in passing urine.

"On the 17th a small slough separated. Patient can retain four ounces of urine when in the recumbent posture.

"December 1st.—The catheter, on being removed, was found coated with a thick deposit of phosphate of lime; urethral canal perceptibly smaller.

"After the expiration of a month, during which there was distillation pretty constantly, with occasional power of retaining several ounces of urine, the cautery was again applied as before. The same manifest improvement followed. The child became much more comfortable, and cleanly in person. The excoriations almost entirely disappeared, and the pustules healed. On three subsequent occasions, (making five in all,) the cautery was repeated after long intervals. The urethra became so much diminished as to admit only a No. 4 catheter; urine escaped only when the patient cried or strained.

"After having been a patient of the hospital about eleven months, during the latter part of which she was an out-patient, coming in at intervals to be operated on, she was discharged. I have since learned that she continues well, with not the slightest evidence of prolapse, but with some degree of incontinence of urine."

REPORT ON INFANTILE PATHOLOGY AND THERAPEUTICS.

By A. JACOB, M.D., Prof. of Infantile Pathology and Therapeutics in the N. Y. Medical College.

- (1.) *Mechanical Causes of Death.* HECKER and BUHL. (Obstetrical Clinic, 1861.)
- (2.) *Congenital Atresia of the Ostium Arteriosum Dextrum.* By CARL HEINE, M.D. (A Contribution to the Science of Congenital Anomalies of the Heart. With a Plate. Tübingen: 1861. Pp. 71.)
- (3.) *On Epidemic Roseola.* By Dr. DE MAN. (Archives of the Dutch Contributions to Natural and Medical Sciences, Vol. III.)

(4.) *Proper Time for Vaccination.* (Arch. Méd., March, 1862.)

(5.) *Medical Report on the Lying-in and Foundling Hospital at Vienna, of the Year 1859.* Pp. 265.

(1.) Of 100 dead new-born infants, the cause of death was a mechanical one in 27; in 11 of these, the cause was obstruction of the respiratory organs; 8 were still-born, and 3 did not survive the first day; one living 3, another 7, the third 21 hours. One died 12 hours before birth. Six were males, 5 females; the average weight was 5.6 pounds Par. The obstruction was due in 10 cases to a greenish or greenish-brown liquid, of the consistency of mucus, filling either the entire larynx and trachea down to the bifurcation, or also the smallest ramifications, or allowed of the entrance of a small quantity of air. Therefore in 6 the lungs were in their fœtal condition, in 5 they were found to contain some air; among these 5 are those 3 who died on the first day; thus leaving 2 dead before birth, whose lungs were inflated to a certain extent. One of these 2 had made instinctive inspiratory movements; in the other artificial respiration had been resorted to. The pulmonary tissue was of a brownish-yellow color, particularly in those containing air; incision and pressure yielded a liquid of the same color. The larger masses found in the trachea looked like the meconium contained in the colon; the pharynx was filled with the same mass; mouth and nostrils contained some; the whole body, and particularly the umbilical cord, were soiled by it. This condition of the surface shows the cause of death before even the post-mortem examination is made. The microscopical examination of the substance contained in the lungs yields yellow or yellowish-red coloring corpuscles of different sizes and irregular shapes; cholesterine frequently; fat-globules and pavement epithelia—*meconium*. At the same time there was very little meconium, or none at all, in the lower portion of the intestinal canal. In those that had made attempts at breathing, meconium was also found in the pulmonary tissue, and the pleuræ exhibited a number of small extravasations; these were not absent even in such cases in which the lungs had remained in their fœtal condition. Pleural cavities were filled with a yellowish-red serum in two cases.

The manner in which meconium entered the lungs cannot be doubtful, after the investigations, (by Hecker, Schwartz, etc.,) on premature respiratory movements. The cause is found in *aspiration*, that is, instinctive inspiration, while still in the uterus. In one case only neither aspiration before or during birth, nor meconium, were the cause of death. A boy with double hare-lip and complete cleft pal-

ate, vomer pointing to the right, was killed by being given a little milk seven hours after birth, during crying. Larynx, trachea, bronchi, and air-cells contained milk. (In the same child there were found besides, patency of the septum of the ventricles, of 8 millim.; deficient development of the tricuspidal valve, and of the external sexual organs; conglutination of the second and third toes, each side; remainders of an inflammatory process in the right heart; whitish thickening of the endocardium; conglutination of the internal and anterior semilunar valves of the pulmonary artery, and thickening of its nodules and free margin.)

The cranium was usually hyperæmic; cephalhæmatoma twice on the right parietal bone, once on both; extravasation once in the left arachnoidal space; once in the pia mater, around the central lobe of the right large hemisphere. Extravasations, like those in the pleuræ, in pericardium, origin of aorta, ductus arter. Botalli, connective tissue of mediastinum, thymus, and cortical substance of kidneys. Ventricles of heart, particularly the right one, and coronary vessels, usually very much injected. Some bloody serum in the abdominal cavity, in two cases.

Other foreign substances were found in the lungs. In two cases there were the fungi of muguet, (*oïdium albicans*, etc.,) transmitted from their usual seat in the mouth; they did not produce pulmonary incompetency, but the infants died of puerperal infection.

(2.) The classification Dr. Heine submits to his readers is somewhat similar to those laid down by Bischoff and Förster for the congenital diseases of the heart. It recommends itself by both its simplicity and completeness.

I. DEVIATIONS AS TO QUANTITY.

A. The normal size and number are not reached.

a. Defects proper.

1. Acardia, entire absence of heart. In Acephali only; the arteries for trunk and extremities originate by direct division of the umbilical vein.
2. Absence of pericardium. Particularly in ectopia.
3. Absence of large blood-vessels.
 - a. Absence of one of the vv. cavæ. Only a single large vein leads to the heart.
 - β. Absence of pulmonary artery. Ductus Botalli remains open and active.
 - γ. Absence of ascending aorta. Pulmonary artery and ductus Botalli act instead.

- d. Absence of ductus arteriosus Botalli.
- b. Incomplete formation of heart in its single parts. Mostly in consequence of interrupted development.
1. Heart consists of but one longitudinal cavity, (or a solid mass, in Zagorsky's case.) Only one v. cava from behind. Only one large artery. Analogous to the heart of Crustacea.
 2. Heart consists of one ventricle and one atrium. The first with one artery, the second with one vein. Analogous to the hearts of fish and batrachia.
 3. Heart consists of two separate atria and one ventricle. Aorta and pulmonary artery separate in some only. Vv. cavæ and pulmonales separate. Septum between the atria more or less complete. Analogous to the heart of fully developed batrachia.
 4. Incomplete development of pericardium. Lower portion is absent; apex of heart between the lobes of the liver.
- c. Abnormal smallness.
1. Of the whole heart.
 2. Of a single cavity.
 3. Abnormal smallness and narrowness of blood-vessels and their ostia, with absence or smallness of valves.
- d. Atresiaë.
1. Of the right,
 2. Of the left venous ostium.
 3. Of the right ostium arteriosum.
 4. Of the left ostium arteriosum.
- } By adhesion, or conglutination of valves, or by pathological processes.
5. Obliteration of the trunk of pulmonary artery.
 6. Obliteration of the trunk of aorta.
- e. Fissures.
1. In the septum of the atria, either remained open or by perforation.
 2. Remaining patency of for. ovale.
- B. The normal size and number are exceeded.
- a. Excessive number.
1. Duplicity of heart, in one body.
 2. Duplicity of one of the atria.
 3. Duplicity of one of the ventricles, usually the right. By separation of the conus arteriosus depending on foetal disease. Described by the English as "supernumerary septum in the right ventricle."

4. Duplicity of one of the large blood-vessels.
5. Supernumerary valves of the ostia.
- b.* Excessive size.
 1. Of the heart.
 2. Of one of its cavities.
 3. Of pericardium.
 4. Of large blood-vessels.

II. DEVIATIONS AS TO QUALITY.

- a.* Anomalies of the shape of the heart—(spherical, flat, long and pointed, broad and obtuse, deep indentation of apex, etc.)
 - b.* Anomalies of position.
 1. Inside the thorax.
 - a.* Too far to the left.
 - β.* To the right.
 - γ.* Transverse position.
 - δ.* Perpendicular position.
 - ε.* Too high.
 - ς.* Too low.
 2. Outside the thorax.
 - a.* In front of the left thorax—(ectopia proper.)
 - β.* In the abdominal cavity.
 - γ.* In the cervical region.
 - c.* Anomalies of the origin of the large blood-vessels.
 1. Only one large blood-vessel from the two ventricles communicating by the septum remaining open.
 2. Pulmonary artery from the left ventricle, together with aorta.
 3. Aorta from the right ventricle, together with pulmonary artery.
 4. Transposition of the two great arteries.
 5. Patency of ductus arteriosus Botalli, (which originally is the right aorta.)
 6. Abnormal origin and ramification of the large veins, (rare.)
- (3.) Dr. J. C. De Man, of Middleburg, Holland, believes that he has brought to a close the old question whether there is a distinct eruptive disease deserving the name of roseola, (or rubeola.) The results of his elaborate essay on this subject are the following:
1. Epidemic roseola or rubeola appears to be an independent disease, taking its own course like other epidemics. It must not be mistaken for measles or scarlatina.
 2. It has been thought to be identical with them. Therefore, its

history is not very well known, and no confidence is to be placed in the assertions of such as deny its occurrence in some countries.

3. It is met with in every season, sparing no age. Children and young women are the principal sufferers.

4. Prodromi are absent in many cases; if not, they are very much like those of other eruptive fevers.

5. For this reason the exanthem is often found very unexpectedly, and has even left part of the surface before the patient is aware of being affected. It is accompanied with much itching.

6. Unless the disease is complicated, fever and other morbid symptoms, if at all present, disappear with the eruption of the exanthem.

7. Most cases are not complicated; sometimes a tracheal cough not similar to cough attending measles; sometimes pharyngeal angina of so little severity that in many cases it is not even followed by a removal of the epithelium.

8. Generally there is no vascular reaction; in some cases it was erethitic, in some inflammatory. Unless the fever is very intense, beneficial perspiration will set in during eruption under the influence of a warm temperature. Urine is almost always normal.

9. The form of the exanthem is that of roseola, and therefore consists of isolated, irregular spots. When it is complicated with tracheal cough it is easily mistaken for measles; when it is confluent, and the mucous membrane of the pharynx is affected at the same time, it looks more like scarlatina.

10. Size, color and extent of the spots depend upon the manner of eruption, vascular reaction, and constitution. The difference is most distinct in anæmic and plethoric persons.

11. The exanthem takes a course of one, two, or three days; remnants, either pale or bluish, are visible for some days longer, and may give rise at a later period to a new eruption.

12. Desquamation rarely takes place; when it is observed, it is less general than in measles, and consists of much smaller scales; desquamation like that attending scarlatina has not been noticed.

13. After the exanthem has disappeared, there is a tendency—but less than after scarlatina—to rheumatism and neuralgic affections.

14. As a rule, there are no consecutive diseases; sometimes, however, glandular swelling and predisposition of dyscrasic nature.

15. The prognosis, therefore, is more favorable than in measles; much more so than in scarlatina. Nevertheless, it is necessary to prevent the development of morbid sanguification and absorption.

16. Neither measles nor scarlatina procure any immunity from roseola, or *vice versâ*.

17. The causes are unknown, and also the manner of its spreading. Many observations appear to favor its contagiousness; but others prove the contrary.

18. Scarlatina, measles, variola, hooping-cough, will frequently affect all the members of a family after the first case; not so roseola.

19. The nature of an epidemic of roseola intimates the question, whether or not this disease has its regular migration over the globe, and whether or not it is but the feeble and last trace of a disease that was attended with more intense symptoms in former periods. The same case is assumed in syphilis and miliaria.

20. Roseola is met with during epidemics of hooping-cough, measles, or scarlatina. In Middelburg, measles and scarlatina had just disappeared when epidemic roseola was observed. At this time, no other case of either measles or scarlatina was observed.

(4.) The Permanent Commission on Vaccine, of the Academy of Medicine of Paris, has arrived, in their yearly report on vaccination, as practiced in 1860, read by Dr. Depaul, at the following conclusions:

1. Vaccination practiced in the first few days after birth does not give rise to either more numerous or more dangerous consequences, than the same operation performed at two or three months.

2. It may be admitted that in general practice, under conditions in which the danger of infection is decidedly small, vaccination may be delayed; but such a delay must be avoided in children born, or sojourning for a time, in hospitals.

(5.) During the year 1859 9,797 infants were received in the Foundling Hospital. Their age was: over a year, in 104; over a month, in 674; under eight days, in 1,255. The other 6,764 had an average age of nine days. Of that number, 3,095 were put down as feeble on the day of their reception.

The reports are as valuable as usual; some prepared with the utmost care and conscientiousness; some less so. Amongst these, we are inclined to count the case of *purulent meningitis*. The child of a wet-nurse, 3½ months old, was brought to the hospital emaciated and anæmic. On the first day symptoms of cerebral hyperæmia, and violent fever with increased temperature, especially about the head. On the second day, the fever persisting, chronic convulsions of the upper extremities and bulbi. On the third day again convulsions, less fever, temperature less increased. On the fourth sopor and excessive anæ-

mia; death. Post-mortem examination: The surface of the large hemispheres covered with purulent exudation; ventricles not dilated; in both of the lungs spumous serum; in the pericardium a small amount of reddish fluid; on the pleura a little tough fibrinous exudation. No mention is made of a close microscopical examination of what is reported to have been purulent exudation. Thick fibrinous exudation on the same parts has quite the appearance of pus, as we have noticed in several instances; and this fact, together with the course of the disease, render a mistake in this case more than probable.

Cerebral Apoplexy.—Three cases, infants 2, 3, and 1 days old, the last of a syphilitic mother. One case was uncomplicated inter-meningeal apoplexy, at the base of the middle lobes of the large hemispheres, in the left lateral ventricle, and around the cerebellum. Liquid contained in the pericardium, of bloody color. Second case: Meningeal and cerebral apoplexy. Copious extravasation in the left arachnoid sac, and left large hemisphere, with extensive destruction of cerebral substance. Third case: Meningeal and cerebral apoplexy. The subcutaneous tissue of the occiput exhibits bloody suffusion; extravasation between the membranes, over both large hemispheres, posteriorly; left lateral ventricle moderately extended with liquid blood; apoplectic infarctus of the size of a bean in the posterior portion of the right large hemisphere; brain generally hyperæmic; lower lobes of both lungs atelectatic; of the left completely, of the right but partially so.

Trismus and Tetanus.—Nine cases. Principal medicaments resorted to, atropia, morphia, quinia. Death

after	7 hours	in	1 case.
"	8	"	1 "
"	24	"	2 cases.
"	2 days	in	2 "
"	3	"	2 "
"	4	"	1 case.

Post-mortem examinations were made in all of the cases. Nothing was found to explain the symptoms. Cerebral hyperæmia, which in itself cannot produce tonic muscular contraction, was found in every case, but justly considered as consequence, not as cause, of the convulsions. No mention, however, is made of the microscopical examination of the spine, which would have been worth the trouble, since the beautiful investigations of Prof. Demme, who always, in cases of tetanus, found increased connective tissue in the spinal substance.

Ophthalmia Neonatorum.—608 infants. The affection commenced

On the 1st day of life in	7 cases.
“ 2d “	5 “
“ 3d “	12 “
“ 4th “	8 “
“ 5th “	14 “
“ 6th “	9 “
“ 7th “	11 “
“ 8th “	159 “
“ 9th “	212 “
“ 10th “	37 “
Between 11th and 20th day in	78 “
“ 21st and 30th “	9 “
Later,	7 “
Both eyes were affected in	409 “
Right eye alone “	19 “
Left “ “	24 “
First right, afterwards left eye, in	46 “
“ left, “ right “	70 “

A large number of patients (193) died, while they were suffering from ophthalmia, of other diseases, partially brought into, partially contracted in, the hospital. The causes of death in these cases were bronchitis and bronchial catarrh, 5; convulsions, 1; congenital debility, 35; diarrhœa, 55; gangrene of external ear, 1; gangrene of cellular tissue, 1; gangrene of umbilicus, 1; hæmorrhage from intestines, 1; pseudo-erysipelas, 1; pneumonia, 6; pyæmia, 1; tabes, 85. Some of the patients entered the hospital with destruction of the cornea, some with obnubilation. During their residence in the hospital no destruction took place, but seven cases of darkening of the cornea; four of which were already entirely relieved while in the institution. Treatment with solution of nitrate of silver, or mitigated nitrate of silver, after the rules laid down by Prof. Arlt. In a few severe cases, embrocations at the same time, of ungt. hydrarg. and extr. hyoseyam., and application of ice. Applications of water were made in many cases.

Bronchial Catarrh and Hypertrophy of Thymus Gland.—The following case is of particular interest: Infant of 33 days, with moderate bronchial catarrh. On the second day fluid evacuations; contain blood in the evening. On the seventh day, bloody evacuations continuing; sugillations around the navel. On the eighth day, hæmorrhage from the umbilicus; blood thin and serous; hæmorrhage re-

lieved but for a short time; pneumonia of left lung; anæmia. Death on the ninth day. Post-mortem examination: Dispersed small extravasations between dura mater and cranium; brain anæmic, serous; serum in the lateral ventricles. Trachea and larynx contain a brownish, tough secretion. Lungs normal; only lower lobe of left lung infiltrated. Heart normal. In pericardium some drachms of reddish fluid. Liver and spleen apparently normal. Several inches around the umbilicus bloody suffusion, circular, between cutis and peritoneum. Recent extravasations in the cellular tissue of left supra-clavicular region. Below the normal thyroid gland, in the place of the thymus gland, lies a tumor, covering the anterior aspect of the heart, and but little covered by the lower portions of the lungs, firmly adhering to the pericardium and diaphragm. It contained much blood, and exhibited under the microscope the elements of the thymus gland. The immense enlargement of the thymus had not given rise to any morbid symptoms during life.

Pneumonia.—Of 48 cases, almost always complicated, (with abscesses, anæmia, gangrene, meningitis, syphilis, diarrhœa, etc.,) 35 died:

21 in 5 days.

7 in 10 “

2 in 20 “

3 in 30 “

1 in 2 months.

1 in 3 “

The infiltration occurred in the commencement in

both lungs in 21 cases.

Only the right lung in 6 “

“ left “ 16 “

First in the left, afterwards right 2 “

“ “ right, “ left 3 “

Interesting post-mortem Examinations.

1. Purulent (?) meningitis over the whole cerebral surface, except the upper surface of cerebellum. Enlarged spleen.

3. Tuberculosis of right lung. Cavity in lower lobe. Tuberculosis of bronchial glands and spleen.

3. Tuberculosis of pleura, both lungs, heart, liver, spleen, bronchial and mesenteric glands. Intestines not affected.

4. Acute hydrocephalus. Three ounces of reddish-dark fluid in the ventricles.

5. Craniotabes. Tuberculosis of apex of left lung. Hard, isolated excrescences on the valves of pulmonary artery.

The Italian Campaign of 1859. Medico-Chirurgical Letters from General Head-Quarters. By Dr. A. BERTHERAND, Principal Medical Officer of the First Class, etc., etc. Translated for the AMERICAN MEDICAL MONTHLY.

LETTER III.

Milan—The Greater Hospital—Temporary Branches—The Institute of Bréra—The Route from Milan to Brescia—The Goître in Lombardy—Sanitary Condition of the Army.

TO PROFESSOR ROUCHER:

My Dear Friend—My letter of the 8th to our worthy colleague, Dr. Frison, closed amid the shouts of the enthusiastic welcome given us by the people of Milan. To add to the numerous accounts which have already reached you of this fairy-like reception, would be superfluous. Allow me, then, continuing my rôle of observer and physician, to lead you from the Corsi and the crowd which overflows them, to the more remote quarters of the city, where Lombard gratitude and charity have generously thrown open asylums to the victims of the field of honor. More than 6,000 wounded French and Austrians are already found gathered in the great city, and soon the glorious but bloody encounter of Melegnano will carry the figure up to 8,000. The most admirably ordered administration might certainly stand appalled! But no emergency can be too great for the sentiments of patriotism and devotion which exalt every Milanese heart. To the large hospitals and infirmaries of Maggiore, San Ambrogio, Fate Bene Fratelli, and Fate Bene Sorelli have been added, as if by magic, the temporary branches of San Lucca, Monastero Maggiore, Collegio San Filippo, etc. Benevolent commissions are organized among the more noted citizens; the most generous donations of bedding, linen and lint, pour in from every side. Physicians, superintendents, even laborers, all are at their post. In order to infuse as much order as possible into this immense service, all the Austrians, whether sick or wounded, are collected in the spacious halls of the San Francesco barracks. The generosity of the Emperor has liberated forty of their captured surgeons, on the sole condition that they shall continue their useful ministrations at that place. San Ambrogio, the ordinary military hospital of Milan, will be especially devoted to the necessities of the Sardinian army, while to the French are assigned the other hospitals which we have named, and those which it is still designed to open. Nor is this all.

To assure to each unfortunate those delicate attentions which, in

the hospitals of our own land, devolve upon the pious labor of the Sisters of St. Vincent de Paul, would necessitate the depopulation of all the convents in Lombardy, and even this holy *impressment* of the daughters of Heaven would not suffice for the emergency. But be reassured; the same public spirit which yesterday enrolled father and son under the banners of Garibaldi, impelling every arm as well as every heart to the conquest of national independence, will to-day recruit among mothers and beloved daughters, these auxiliary legions of religious devotion. Our wounded will soon tell you themselves of their hourly attentions, the constancy with which they dressed their wounds, proof against the heart-rending scenes of the hospital, and of those nameless alleviations, the potent secret of which woman's heart never so nobly divulged!

God forbid that among so many instances of assiduous care, of generous self-devotion, of kindnesses lavished without preference as they were without ostentation, I should be willing to establish degrees, to concentrate on certain of the guardian angels of our soldiers' couches of pain, the respect and admiration in which the gratitude of our army blends them all without distinction. And yet, how can I impose silence upon the memories of our visit to San Filippo, on the 10th of June? There, as everywhere, charity watched, ever alert, earnest, indefatigable. In one of the lower wards, occupied by those who were more severely wounded, two women that morning come from Melegnano, mother and daughter, both young and beautiful; the Marquess L. and the Comtess M. were bestowing their impromptu ministrations with a grace at once touching and sad. The severe mourning robes of the Marquess served to deepen the tinge of melancholy which marked her demeanor. It was evident that the echo of a cruel loss had inspired the heart of this noble mother with the heroism needful for the sad pilgrimage which she was to-day making, courageous, but heart-broken. Do but hear the Christian and sublime simplicity of her faith! "War, sir, snatched from me my eldest son: he died eight months since, from the effects of a ball received while fighting with your army at Sebastopol. When I learned that wounded Frenchmen had arrived at Milan, and that I could dress their wounds, I felt that God had sent me his first consolation."

The Greater Hospital, or Grand Civil Hospital, founded towards the middle of the fifteenth century, by the generous provisions of F. Sforza and Blanche Marie Visconte, his wife, commends itself by the spaciousness of its porticoes and courts. Several of its wards recall the appearance and height of the naves of our churches. Having its

rear on the Naviglio, its proximity to this canal affords inexhaustible supplies of water for the wants of its large population, (from 2,500 to 3,000 patients,) and insures the maintenance of a degree of cleanliness beyond anything that could be hoped for.

At the Greater Hospital, I had an opportunity of seeing—unfortunately the interview was a very brief one—the glorious wreck of the First Regiment of Zouaves, which left Algiers, so full, so brilliant, a few days before my own departure, and of which Melegno had just put *hors du combat* the colonel, thirty-three officers, and five hundred of its bravest soldiers! I regret, too, that lack of time prevented my meeting our worthy Milanese *confrères*, M. Gherini, the renowned operator, M. Cotta, those skillful physicians Griffini and Strambio, so honorably known from their connection with the medical press of Lombardy, and that phalanx of enlightened practitioners who are distributed through the numerous dependencies of the large civil and military hospitals of the city. To say that the important superintendence of this vast total of surgical departments is to be confided to the direction of our learned colleague, the principal Medical Officer, M. Cuvellier, is but to guarantee in advance the good management of an organization on which the Surgeon-in-Chief, Larrey, has bestowed so much anxious care. The army, if the fortunes of war so demand, will find behind it protection and shelter for more than eight thousand wounded.

Although it does not take rank among the Universities of Italy, the city of Milan has yet possessed, since the commencement of this century, an important Academic Institute, in which the principal branches of public instruction, the various sciences, letters, and the fine arts are represented. Pensioned members and amateur investigators are charged with the examination of useful discoveries and the perfecting of every line of study. Established in an old convent of the Jesuits, the Breva Palace, is interesting as much from its sculptural beauties, its library, its manuscripts, its pictures, its frescoes, its coins, its Observatory, and the rich collections of its botanical garden, as from its peculiar architecture. Imagine a spacious, quadrangular court, surrounded by two stories of arches, supported by double columns; opposite to the entrance, under a majestic vestibule, two stairways sending up their marble spirals, and reuniting at the next story on a common platform; on either side, two colossal statues, of Beccaria and Parini, and you will have a feeble idea of the impression of grandeur which one feels on entering this temple, raised in honor of genius, to the culture of the intellect. How much have I

regretted, my dear friend, in the midst of these wonders, my inability to handle the pencil! How grandly would a sketch of Brega have inspired you, in the plans which they tell me you are pursuing to elevate our Algiers Medical School from the humble cradle of its modest infancy! Designs by Richini and Piermanni, a few marbles by Marchesi and Monti, the funds secured in advance from our Algerian ediles, and you have, at one stroke, endowed our rising faculty with a monument worthy of its future destinies.

On the morning of the 12th we leave for Brescia. The air is damp and cold, the sky still heavy with clouds, which have darkened it regularly every evening since our arrival, and expend themselves during the night in violent storms. They call it only about twenty-five leagues from Milan to Brescia, and we must devote at least seven hours to the journey. Indeed, the Austrian army, fighting, as it retreats, before our advance guard, marches compact and in battle array. We are thus compelled to mass our entire force, and to advance in line, ready at any moment to give or to accept battle. When a hundred and twenty-five thousand men are thus thrown forward, followed by their baggage, their provisions, ambulances, artillery, munitions, reserves, etc., how is it possible to accomplish more than five to six miles in a march, over roads on which trains are hourly crossing each other's paths in inextricable confusion? This march by short stages, at the same time that it husband's the strength of the soldiers, gives us an opportunity to observe with a minuteness which cannot fail to be productive of useful results, the principal aspects and resources of the country.

The proverbial richness of the verdant plains of Lombardy justifies, perhaps even surpasses, their reputation. It is impossible to find fields more highly cultivated, greener meadows, more beautiful borders of mottled mulberries, or a more perfect system of irrigation. The design and first execution of the last belong, they assure us, to the Roman epoch. In striking contrast is the condition of the population of these regions, apparently so favored by Heaven. They appear wretched, emaciated, and in some places very generally affected by goitre. Is iodine, atmospheric air, or the saline element wanting in these beautiful waters, which, flowing always over beds of sand and gravel, come down so limpid and cool from the torrents and lakes of Upper Italy? Or must we attribute the prevalence of the disease to insufficiency of food, among the villagers of the interior, immovably devoted to their diet of *polenta*, (a porridge made from Indian corn?) As far as the influence of the water as an etiological agent is con-

cerned, the analysis of numerous specimens collected from Milan to the Lake of Guardo and the Mincio, by our learned colleague of the Medical School, M. De Lille, Prof. Brauwiers, the Apothecary Major, and his zealous co-laborer of the ambulance corps of the General Head-Quarters, Assistant Apothecary, Major Viltard, will undoubtedly afford valuable elucidations of one of the most vexed problems of pathogeny. If I may rely upon a distinguished physician of Brescia, the goitre really exists as an endemic disease in Lombardy, only at the very feet of the southern slopes of the Alps, and almost exclusively in localities whose topographical situation prevents their receiving the atmospheric currents of the northern winds. It would certainly be a matter of interest to verify this statement.

The majority of the cities which we pass through—Gorgonzola, Cassano, Triviglio, Romano, Cava, Calcio, and Travagliato—possess small civil hospitals, sometimes founded long since, and supported by donations and special legacies, in old convents or in buildings erected for the purpose; sometimes temporary affairs, dating from the last epidemic of cholera, and situated in private houses, awaiting a definitive organization. Several among the first class, as those of Gorgonzola and Travagliato, possess considerable architectural importance. Completing their deficiencies by sub-hospitals in the barracks, churches, castles, and large private houses, each of these establishments will be enabled, in case of an engagement, to furnish hospital accommodations, though it be but temporarily, to five or six hundred men. We do not leave these various lodging-places without having personally informed ourselves of the means of transportation which the local administration can place at our disposal in case of need, and every evening I address a very circumstantial report to the Surgeon-in-Chief on this subject.

Despite a heat at times Algerian in its intensity, and a dust often stifling, the sanitary condition of the troops is excellent. We notice as yet only a few cases of gastric derangement of a remittent type, and quite a number of returns of intermittent disease among the soldiers who belong to African regiments. Two principal causes seem to me to contribute to this otherwise unimportant affection: 1st. The cold nights, the soldiers not being provided with blankets for the bivouac; 2d. The immoderate use of water and adulterated liquors.

The art of adulterating wines must have had its origin with the sutlers of armies. To manufacture wine on the spot is an effective

method of avoiding the expenses and risks of a difficult transportation.

R.—Of water from the nearest ditch,

Alum,

Beet-juice,

Amylic alcohol, (or any other cheap product of distillation,) āā., q. s., according to the vintage or brand required.

Mix in an *old* cask.

The recipe, you must grant, is expeditious, and besides, enables the maker to cheat the vigilance of the customs.

At last, here we are in Brescia—and undoubtedly likely to be for several days to come. My pen claims, in its turn, a little rest, after the long march that it has just accomplished.

Trusting, nevertheless, that you will not, like myself, find it too long, believe me

Ever yours affectionately.

BRESCIA, *June 18th*, 1859.

REVIEWS AND BIBLIOGRAPHY.

Commentaries on the Surgery of the War in Portugal, Spain, France, and the Netherlands, from the Battle of Roliça, in 1808, to that of Waterloo, in 1815, with Additions Relating to those in the Crimea in 1854–1855. Showing the Improvements made during and since that Period in the great Art and Science of Surgery on all the Subjects to which they relate. Revised to October, 1855. By G. J. GUTHRIE, F.R.S. Sixth Edition. Philadelphia: J. B. Lippincott & Co. 1862.

A Treatise on Gunshot Wounds. By T. LONGMORE, Esq., Deputy Inspector-General of Hospitals; Professor of Military Surgery at Fort Pitt, Chatham. Philadelphia: J. B. Lippincott & Co. 1862.

On Bandaging and other Operations of Minor Surgery. By F. W. SARGENT, M.D., Member of the College of Physicians of Philadelphia, one of the Surgeons to Wills' Hospital, etc., etc. New Edition, with an Additional Chapter on Military Surgery, by W. F. ATLEE, M.D., and One Hundred and Eighty-Seven Illustrations. Philadelphia: Blanchard & Lea. 1861.

In placing the two first of these works within the reach of the American surgeon, Messrs. Lippincott & Co. have manifested that appreciation of the necessities of the hour which characterizes them

above all other publishers, and have rendered a very essential service to the profession. We consider it a decided mistake to suppose that because our regiments with their surgeons are all now in the field, and that preliminary knowledge of the hygiene of camps, so essential to the Army Surgeon, has been to some extent acquired, the demand for works of this description will necessarily decrease. On the contrary, although there may be a temporary cessation of the "rush" for them which existed last summer, we are fully convinced that the battle-fields which are now multiplying so rapidly throughout the whole breadth of our land, will afford material for surgical skill to be exerted here at home, which will lead many a practitioner who has previously devoted no attention to this particular branch of our science, to become a *military surgeon*. Love of country and of kind, if not of science, must produce this result. And apart from this immediate cause of demand, an interest has been aroused in all matters pertaining to the art of war, which will not die out with the death of the rebellion, or even of the generation. Henceforth no physician will consider his library complete without some work on the wounds of warfare on its shelves. And this book of the brave old Guthrie, whose enthusiasm in the cause of the "great art and science of surgery" fifty years could not dampen, (notwithstanding the playful allusion to Bob Acres in his preface to the first edition,) this book, we say, is precisely the one which from its comprehensive grasp, and its attention to the after-treatment of cases, will be a favorite in the wards of the military hospitals which the next few months will see so widely scattered throughout the North. The subject of gunshot wounds is taken up in the first chapter, and despite the slight alteration in the severity and character of these wounds, owing to the modern projectiles, we find little in the treatise of Mr. Longmore, as far as the matter of treatment goes, to add to the rules here laid down. The cold-water dressing, the absence of heating bandages, when necessary warm water, applied with piline, gutta percha, oiled silk, etc., (for ourselves we consider no material so efficient and so readily available as the piline,) constitute the simple directions for the treatment of the flesh wounds. The testimony against poultices is emphatic, but in our opinion not one whit too much so. "*No poultices should be permitted in a military hospital until the principal surgeon is satisfied that they are necessary. They are generally cloaks for negligence, and sure precursors of amputation in all serious injuries of bones and joints.*" We are somewhat surprised to find SARGENT still clinging to

the poultice abomination, and elaborating an argument against the warm-water dressing, applied in any way, and the piline in particular.

At the close of this chapter, in speaking of the rarity of bayonet wounds, the author states a fact with regard to the use of that weapon, which, although not at all surgical, we cannot forbear quoting, for its honesty and pith, as well as to correct erroneous impressions, which we doubt not are shared by our own countrymen in common with his.

"A great delusion is cherished in Great Britain on the subject of the bayonet; a sort of monomania, very gratifying to the national vanity, but not quite in accordance with the matter of fact. Opposing regiments, when formed in line, and charging with fixed bayonets, never meet and struggle hand to hand and foot to foot, and this for the very best possible reason: that one side turns around and runs away as soon as the other comes near enough to do any possible mischief, doubtless considering that discretion is the better part of valor." Certain it is that the testimony of all military surgeons is to the effect that bayonet wounds are of extremely rare occurrence. Even Bertherand, who followed the bayoneting Zouaves in Italy, thought himself fortunate in seeing half a dozen cases after one of their severest battles.

Guthrie's lectures, being intended for a class of students or young practitioners, contain much that is elementary; one entire chapter, for example, being devoted to the anatomy of the arteries and collateral circulation. To the subject of wounds of arteries six chapters are given; rather an undue allowance, one would say, were it not that in the treatment of these wounds the author claims to have made important improvements; indeed, to have introduced the modern system of treatment, as opposed to that of Hunter, which had previously been followed. It is unnecessary here to repeat his propositions, founded on the different conditions of healthy and diseased arteries, which are well known to surgeons; suffice it to say that his claim, which we think is universally admitted, is to have introduced the method, 1st, of ligating the wounded artery *in the wound*, instead of at a distance from it on the cardiac side; and 2d, of ligating *both ends* of the divided vessel, the distal as well as the cardiac. The directions for the performance of the operation on all of the large trunks are minute and faithful, indicating a very careful study of the anatomical relations of the parts, and forming an excellent guide for the young or unaccustomed operator.

Lecture XXI., on Inflammatory Affections of the Thorax, might, in our opinion, better have been omitted. It is out of place in a

work on the *Surgery of War*, and its practice is simply shocking. If introduced into our army, we are convinced the results would be fearful. Bleeding with no other limit than syncope, antimony and calomel would be as efficient weapons as Minié balls in the destruction of our troops. The point, however, which he makes in regard to the harmlessness of air admitted into the healthy pleural cavity, as well as into the abdominal cavity, is one of importance, and greatly in advance of the times in which he made his observations. One feature of the book is the immense number of illustrative cases introduced, which, while they add to its interest, bear strong testimony to the extent of the author's experience. The impression which he produces on the mind of the reader is that of a master in his art and an original thinker. Mr. Longmore, on the other hand, while perfectly at home in his subject, seems to be rather a painstaking student and compiler. His work is an admirable *résumé* of the present state of our knowledge on this class of injuries, elegantly, concisely, and simply written, and methodically arranged. Its small size renders it an especially convenient manual for the surgeon in the field, for whose use it was probably intended. The author quotes Guthrie and McLeod freely, and shows great familiarity with all the modern writers on this department of surgery. In regard to the distinctive nature of the wounds produced by the modern projectiles, he says: "The change in form from the round to the prolonged cylindro-conoidal ball seems to derive its chief importance in surgery from the conical end possessing the mechanical characteristic of a wedge, while the former acted simply as an obtuse body. From this quality the power of penetration of conical bullets is greater, independent of the increased momentum imparted to them by the construction of the weapons from which they are discharged. Thus, supposing one of the old musket bullets to strike a limb at eighty yards, and an Enfield rifle conical bullet of the same weight at eight hundred yards, the rate of velocity being similar in each case, the injury from the latter may be considerably greater than that from the former, on account of its shape. The wedge-like quality of the conical bullet is rendered particularly obvious on its being driven into the shafts of the long bones of the extremities. The solid, osseous texture, of which the cylindrical portion of these bones is composed, is split up into fragments, having mainly a direction parallel with the central cavity, and fissures not infrequently extend from the seat of injury to their terminations in the joints, of which they form component parts. Such results were scarcely ever noticed, from the impulse

of the round balls. The bone might be comminuted, but the fragments were of a more cuboid shape, and the long fissuring did not occur. He is not inclined to attribute much importance to the spiral motion of the bullet; not as much, we think, as the physics of the case warrant. A ball rotating at the rate of seventy times a second must acquire a considerably increased power of penetration in consequence. The varying weights of bullets he considers of little importance. We have already alluded, in a notice of McLeod's and Bertherand's works, to the different impressions which these gentlemen received of the destructive power of conoidal balls, owing to the differences in the weight of those used by their opponents, the Russians employing a much heavier ball than the English, while those of both French and Austrians were still lighter than the latter.

Mr. Longmore's book is divided into two parts, the first of which treats of GUNSHOT WOUNDS IN GENERAL, and the second of GUNSHOT WOUNDS IN SPECIAL REGIONS; the latter considering separately and in the following order: wounds of the head, spine, face, chest, neck, abdomen, perineum, and genito-urinary organs and extremities. The section on gunshot wounds of the head is particularly valuable, and its division at once simple and practical. It is as follows: wounds of the scalp and pericranium—wounds complicated with fracture, but without depression on the cerebrum—wounds complicated with fracture and depression on the cerebrum—and with penetration of the cerebrum. In regard to the use of the trephine, he tells us that "the tendency of the most recent experience has been to limit the practice of trephining to the narrowest sphere," and we find concurrent evidence of this in every modern writer on military surgery. Although out of four operations at Brescia, during the Italian Campaign, three were successful, it is probable that the success was owing to their having been carefully selected from a large number of cases.

The immense importance of chloroform in military surgery is strongly insisted on by both writers, and Dr. Atlee concludes the little essay on gunshot wounds which he has appended to Dr. Sargent's work, by saying, "It must be concluded, therefore, that the advantages derived from the use of anæsthetics are even more evident and more appreciated in military than in civil practice." Longmore well remarks that "the quantity" of sulphuric ether "required to produce anæsthesia—from four to eight ounces—would render the use of this agent almost impracticable in extensive operations on the field," while the mortality from chloroform in hospital surgery "has been recently estimated at but one in 16,000."

The idea of the English Inspector-General, that "the smart of the knife is a powerful stimulant," is too absurd and too false to need to be more than noticed, and we are glad to find that his subordinates in the service did not suffer themselves to be deterred from endeavoring to mitigate "the smart of the knife" by employing chloroform whenever it was available, notwithstanding his ill-conceived caution. It seems that our own service is not the only one which has suffered from the incubus of an inefficient and anti-progressive head.

Sargent's little work has been a standard text-book for students ever since its first appearance, and we see no reason why it should not maintain its position. Its copious illustrations add not a little to its value, but we think the publishers do it injustice in having many of them so wretchedly executed. When good wood-cuts are to be had so cheaply, there is no excuse for introducing poor ones—faulty in design and rough in execution, in a scientific work. The chapter on gunshot wounds is a brief compend, following Longmore pretty closely, but by no means a substitute for his complete treatise, and, while very well in itself, we doubt if it will be found to add particularly to the sale or popularity of the book. 

Anatomy—Descriptive and Surgical. By H. GRAY, F.R.S., Fellow of the Royal College of Surgeons, and Lecturer on Anatomy at St. George's Hospital Medical School, &c., &c. Second American Edition, from the Revised and Enlarged London Edition: with Three Hundred and Ninety-Five Engravings on Wood. Philadelphia: Blanchard & Lea. 1862.

The second edition of this voluminous work has been issued by the indefatigable publishers, Messrs. Blanchard & Lea. In preparing this second edition, the author states that he has endeavored to correct any inaccuracies contained in the previous edition, every page being carefully revised, besides much new matter being added in connection with several new illustrations.

The object of this great work, whilst embracing the most detailed descriptive anatomy, is to delineate step by step the application of the science of anatomy to practical surgery. This all-important object has been obtained by introducing in small type, under their respective divisions, such practical and minute regional descriptions as serve to attract not only the mind of the student to the absolute necessity of an accurate anatomical knowledge of every operative region, but also

to refresh the memory of the surgeon who cannot constantly avail himself of practical detail in the dissecting-room.

But in introducing these most valuable surgical references, the beauty of the work has been marred by this very smallness of type mentioned in the preface to the first edition. In a work so voluminous in anatomical detail, the mere increase in size would not have been so great as to have rendered it unwieldy, or to have diminished its sale value, had the larger type been continued. The eye becomes annoyed (especially if the reader is not this side of forty) by following the lines so reduced in type and interval across a broad page. The same minuteness has been observed in the lettering of many of the plates, a magnifying-glass being at times necessary to enable one to read the name of the designated parts. Objections, we know, have been urged by some teachers of anatomy to this method of lettering on the part itself, the usual linear or numerical plan being preferred by them, as being, in their opinion, more instructive and exercising to the memory. In our view, this local lettering forms not only a most agreeable, but a most time-saving method, and cannot fail to recommend itself both to the student and practitioner. It not only demonstrates the part clearly without the trying search after lines or numbers, at times completely hid in printers' ink, but tends to cause a more accurate study of the engrouped portions similarly lettered.

The prominent anatomical features of this work are to be found in the early portion devoted to osteology, and the subsequent part assigned to the anatomy of the nervous system. The drawings in these, as indeed in other portions of the work, are unexceptionable. The various bones are illustrated by lettered engravings, which render distinctly cognizable the numerous processes and the attachments of the muscles. The latter are shown by dotted lines, and thus must necessarily aid the student in memorizing these important positions, whilst they form a comprehensive regional reference to the surgeon. By a knowledge of the attachments, and of the action of muscles, together with their linear markings on or below the surface, the surgeon is enabled to comprehend the nature of any particular dislocation, fracture, or deformity arising from or accompanied by muscular tension or relaxation. The muscular relations are also all essential to be remembered and recognized in the operation of ligaturing the greater vessels, or in the sections, or avoiding of section of the important nerves.

In these points of view alone, this work on Descriptive Surgical Anatomy will become a necessary addition to the library of every surgeon, and will be found comprehensively reliable.

Under "Muscles and Fascia, Orbital Region," page 245, "the Surgical Anatomy" of the parts, as well as the method of operation to be pursued in convergent and divergent strabismus, is thus described: "The position and exact point of insertion of the tendons of the internal and external recti muscles into the globe should be carefully examined from the front of the eyeball, as the surgeon is often required to divide one or the other muscle for the cure of strabismus. In convergent strabismus, which is the most common form of the disease, the eye is turned inward, requiring the division of the internal rectus. In the divergent form, which is more rare, the eye is turned outwardly, the external rectus being especially implicated. The deformity produced in either case is considerable, and is easily remedied by division of one or the other muscle. This operation is readily effected by having the lids well separated by retractors held by an assistant; the eyeball being drawn outward, the conjunctiva should be raised by a pair of forceps and divided immediately beneath the lower border of the tendon of the internal rectus, a little behind its insertion into the sclerotica; the submucous areolar tissue is then divided, and into the small aperture thus made a blunt hook is passed upward between the muscle and the globe, and the tendon of the muscle and conjunctiva covering it divided by a pair of blunt-pointed scissors. Or the tendon may be divided by a subconjunctival incision: one blade of the scissors being passed upward between the tendon and the conjunctiva, and the other between the tendon and sclerotica. The student, when dissecting these muscles, should remove on one side of the subject the conjunctiva from the front of the eye, in order to see more accurately the position of these tendons, and on the opposite side the operation may be performed."

These descriptions, although intelligible, are not grammatically expressed. By reference to the above text, such changes of tense will be observed as, "this operation *is* readily effected," "the conjunctiva should be raised," "the submucous areolar tissue *is* then divided," "a blunt hook is passed," &c. We would direct the author's attention to these inaccuracies of expression, that the ensuing editions may be purged from such faulty constructions of sentences. Also, at page 418, fifth line, under Arteries, we find the following: "*Each* vessel is directed to the back part of the corresponding bronchus, along which *they* run," &c. Such errors in a second edition are inexcusable, and seriously damage the value of a work intended as a text-book and designed as a necessary addition to the table library of every surgeon. We would also recommend that the directions for dissection should not

be included with the descriptive surgical anatomy, as in the paragraph just quoted.

The term "disease" is also frequently used in place of "affection." At page 256, under surgical anatomy in "wry neck" we find the following: "When all other remedies for the relief of this *disease* have failed, subcutaneous division of the muscle is resorted to." Does the author mean that all persons laboring under "wry neck" are always operated on by the attending physician or surgeon when other remedial means have proved ineffectual? The sentence being rendered "can be," or "should be," would probably define his views correctly. These errors of tense pervade the whole work, and we hope to find them corrected in future editions.

The directions for dissection are explicit, and cannot fail to serve in guiding the student as well as the "renovator" in the best method of "exhibiting" to be pursued.

Those portions devoted to the dissection and surgical anatomy of "Hernia" are most valuable. The directions and descriptions are comprehensive, and the parts involved are clearly and truthfully illustrated. The surgical anatomy of the various fractures forms a complete vade-mecum. The chief fractures are exhibited in the most satisfactory manner. These drawings cannot fail to impress on the attentive student the diagnostic differences of the various fractures, whilst the surgical treatments are fully described. Under this particular department are treated the fractures of the clavicle, (acromial, middle, and sternal,) Colles, (lower end of radius,) coracoid process, coronoid process of ulna, femur above condyles, below trochanters, neck, fibula, (with dislocation of the tibia called "Pott's,") humerus, anatomical neck, shaft, and surgical neck, olecranon process, patella, radius, shaft and ulna, tibia and shaft.

Under Surgical Anatomy of Arteries will be found, "of abdominal aorta and thoracic arch of aorta, anterior posterior tibial, axillary, brachial, common carotid, external and internal iliac, dorsalis pedis, fascial, femoral, innominate, lingual, popliteal, radial, subclavian, thyroïd, temporal, and ulna arteries." Copious descriptions of the surgical anatomy of other portions of the body abound through the whole work. How valuable these lessons of reference will be found by the active surgeon, need only be proved by the want experienced by him when called suddenly on to operate, in not having access to works specially devoted to surgery. The illustrations will serve to refresh the memory, whilst the letter-engravings will not only save time, but designate clearly the regional distinctions of any selected part.

But in a work so copiously illustrated, and so voluminously descriptive, we should have anticipated that greater space would have been allotted to histology and microscopic delineation. Here and there we find a slight attention paid to these now so essential portions in a work devoted to descriptive and surgical anatomy. It is in vain to endeavor to describe minute structures intelligibly to a student, unless he is supplied with some representation of the elements so detailed. An author must not take for granted that the student already has such illustrations, or has seen the parts under the microscope. The author must assume that the student has no other work than his, and even if he has, that the correctness of prior illustrations should be verified or disproved by those in the late work he wishes to purchase or has already bought.

The completeness of this work, therefore, is marred, and we hope to find that these omissions have been corrected in the subsequent editions. While here we will add that a certain obscurity attends the arrangement of many of the sentences. Explicitness forms the chief value of any descriptive work, and should be especially found when treating so exact a subject as anatomy. The very attempt to condense has often rendered the author obscure and diffuse.

We are disposed to find fault at the hasty manner in which some of the most important subjects are treated. We will mention only one, viz.: the kidneys. Three pages comprise their whole descriptive anatomy. The epithelium of the tubuli uriniferi is stated to be of the spheroidal kind, when it has for years been shown to be of the pavement or tessellated variety. Nor are there any allusions to the uses of the Malpighian tufts, or any mention made of the fibrous matrix of the kidney, or of the arrangement of the minute vessels as they pass through the substance of the matrix, unless the author means the statement as to the sheaths to the vessels derived from the fibrous capsule to be so considered. We would suggest to the author before publishing another edition that he would procure a copy of the "Researches into the Structure and Physiology of the Kidney, by (late) Charles E. Isaacs, M.D., Demonstrator of Anatomy in the University of the City of New York, and read before the New York Academy of Medicine, March 5th, 1856."

A chapter devoted to the various kinds of epithelium would be an addition, and certainly an improvement to the work.

In thus exposing certain irregularities and imperfections, we do not wish to detract from the really great value of this splendid work of Dr. Gray, which will be found most comprehensively reliable by the stu-

dent, and of inestimable value to the surgeon. It is from our high consideration of its real merits that we wish to attract the author's attention to certain omissions, hoping in a future edition he will rectify them, and add other matter which will serve to enhance still more the value of his stupendous undertaking.

The getting up of this work is most creditable to the American publishers. The binding, paper, and type are unexceptionable. We finish by hoping that every student and surgeon in the land will procure a copy of a work that cannot fail to inure, from its faithful study, to their satisfaction and improvement.

H. P. D.

Researches and Observations on Pelvic Hæmatocele. By J. BYRNE, M.D., M.R.C.S.E., Resident Fellow of the New York Academy of Medicine, etc. New York: William Wood, 61 Walker Street. 1862.

We listened with great interest to the reading of the author's paper before the Academy of Medicine, which forms the basis of the present monograph. In thus amplifying it, he has added essentially to the value of an already useful production. The loose character of the discussion which followed its reading, pelvic abscess and artificial anus being strangely dragged into it, was a sufficient proof of the necessity which existed for just such a careful and philosophic presentation of the subject as that before us.

Reviewing the somewhat meagre annals of the affection in question, as found in both English and French authors, Dr. Byrne presents succinctly the opinions of the more eminent of them, making them the subject of an intelligent criticism, and modestly states his grounds for differing with them on some important points of pathology and treatment, sustaining his own views by reference to cases occurring in his own experience or that of other practitioners. He considers that the extravasation is generally external to the peritoneum, and speaks thus of the opposite opinion of M. Voisin:

"In acknowledging but this one form of hæmatocele, that author goes so far as to say, that a bloody tumor in any other situation outside the recto-uterine *cul-de-sac* is not the result of menstrual disorder, does not necessarily occur at a catamenial period, but must be the consequence of some injury, and should, therefore, be designated as *thrombus*. This is truly 'a distinction without a difference,' except in so far as the fate of the patient is concerned, and entirely op-

posed to the opinions of Richet, Scanzoni, Nonat, Prost, and other high authorities, worthy of more consideration than seems to have been accorded by Voisin. Moreover, a careful perusal of the cases collected by this author must convince any impartial reader that many of them offer examples of that very form of hæmatocele which he seems to ignore."

The fact that post-mortem appearances so often indicate the reverse, he attributes to the fact that the intra-peritoneal form is so much more fatal. His definition is as follows:

"The tumor to which the term hæmatocele, or hæmatoma, has been correctly applied, may be defined *an extravasation of blood into or beneath the pelvic peritoneum*; and on account of the space in which this form of tumor has been, for the most part, noticed, it has generally been described as 'recto-uterine,' 'retro-uterine,' or 'peri-uterine.' But, as the extravasated fluid does not invariably select either of the locations thus indicated, the more correct, and at the same time comprehensive term, of *pelvic hæmatocele* should, I think, be used, as it includes every form of this affection, whether intra or sub-peritoneal, diffused or encysted. The following case, which has come under my own observation, may more clearly elucidate what I mean.

"Case I.—A lady, aged 21, of robust habit and good constitution, was married at the age of 16, and has given birth to three children. In her first labor she had convulsions, and was delivered of a well-formed, but dead child, by forceps. She soon recovered, however, without any unfavorable symptom other than might be anticipated in such a case; her second confinement was natural in every respect, but on the third day she was taken with chills and symptoms of metro-peritonitis, from which she also quickly recovered, and enjoyed excellent health up to her third labor. Her convalescence on this occasion was uninterrupted, except that she complained of a continual soreness in the right ovarian region, first noticed when she commenced to sit up. At the expiration of three weeks—this pain still continuing—she ventured out, but had not gone far before she was seized with most acute suffering or 'cramp,' as she termed it, in the lower portion of her abdomen, accompanied with tenesmus and difficult micturition.

"These symptoms gradually subsided under proper antiphlogistic treatment, but the original pain remained as before, and continued, with occasional remissions, for the following nine months, when, during an unusually severe paroxysm, she felt as if something had given way, and soon after discovered a *firm* tumor occupying the right ovarian region; the swelling was about the size of a turkey's egg, and

tender to the touch. She was not nursing, and menstruation was perfectly regular. After three or four months the tumor became less sensitive and smaller, and in less than twelve months there was no trace of it to be found, and her health improved rapidly. The principal treatment consisted in counter-irritation, and the internal and topical use of iodine."

With the view of its location which he assumes, he, of course, cannot refer it to disordered menstruation as a frequent cause. He rather supposes it to be due to a varicose condition of the ovario-uterine vessels, the result of ovarian inflammation. Other causes may operate, but this is by far the most frequent. The exciting cause is any condition, whether mental or physical, which tends to a sudden active congestion of the internal organs of generation.

The *symptoms* of hæmorrhage taking place from the under surface of the ovary, or within the folds of the broad ligament, are detailed as follows:

"The patient having previously suffered more than usual from pain in one or other iliac region, will complain suddenly of severe cramp in the lower portion of the bowels, accompanied or soon followed by tenesmus, and weight referred to the loins and sacrum; there may be painful and difficult micturition, and if the quantity of blood poured out be great, faintness, and even complete syncope, may now take place; the skin assumes a pale or sometimes anæmic hue; the extremities become cold, the countenance anxious, pulse small and frequent, and the abdomen tympanitic, and very sensible to pressure, particularly over the seat of the rupture. At this stage of the case, a vaginal examination will rarely fail to detect a tolerably firm and irregular tumor, somewhat painful to the touch, and situated directly behind, or to either side of the uterus."

We wish that we had space for the very interesting history which is given of a case illustrative of this phase of the disease—interesting alike from the care with which the symptoms are described, and the practical value of the narration of the different steps of the treatment, its failures, reverses, and final success.

The intra-peritoneal hæmatocele, on the other hand, is characterized by a much more startling set of symptoms from the moment of the effusion of the blood.

"The pain referred to the hypogastrium will be more intense, and the collapse more complete and enduring; the abdomen rapidly becomes tympanitic, and vomiting of brown or dark grumous liquid, now incessant, adds much to the distress of the patient; the pulse, if per-

ceptible, is very small and rapid, and the features assume a Hippocratic expression. Voisin, referring to the frequent absence of premonitory signs indicative of the occurrence, says that 'the suddenness of the symptoms has sometimes led to the suspicion of poisoning.'

"The following case I assume to be an example of fatal intra-peritoneal extravasation:

"*Case II.*—On the 13th of last September I was sent for to see Mrs. L., aged 34 years, a widow, and the mother of two children, aged respectively, seven and five years; she was of delicate, but apparently healthy constitution; had always menstruated regularly, but said her last three 'turns' were attended with a good deal of suffering, and in the intervals she had complained much of pain in the right side, which never left her, but was particularly severe for some days before and after the 'flow.' For the last three days this pain has been gradually getting worse, until now she cannot bear the slightest pressure over the part affected; she says she would have consulted me sooner, but supposed every moment she might get relief by the appearance of her courses.

"The patient lies with her legs drawn up, and on the affected side; the situation of the pain is the right iliac fossa, and a little towards the centre; there is no noticeable swelling of the abdomen, but it is acutely sensitive over the affected part; pulse 112, and sharp; tongue furred, but moist; the bowels were opened by castor oil in the morning. Ordered twelve leeches, to be followed by warm fomentations and a powder containing two grains of calomel and one of opium every three hours. *Sept. 14.*—Feels much relieved, and tenderness in the side almost gone; the catamenia appeared this morning; pulse 90, and soft. Within one week the patient expressed herself as perfectly well, and continued so up to the 18th of November.

"The catamenial period succeeding her former illness passed over without pain or inconvenience, but this time it was attended with great distress, and suddenly ceased during the night, when her sufferings became greater, and soon after she was seized by a most acute 'cramp' in the lower part of her abdomen and right side. A few hours after this occurrence I saw her, when she presented the appearance of a patient in the last stage of Asiatic cholera; the skin was of a bluish or leaden hue, extremities cold, countenance anxious; pulse 130, and thready; abdomen tympanitic and intensely painful to the touch, and vomiting constant. Stimulants and restoratives failed to produce reaction, and she died within a few hours. I regret to be

unable to say more about this interesting case, as neither a post-mortem nor even a vaginal examination would be permitted."

With regard to diagnosis, these tumors are to be distinguished from those dependent upon purulent effusions and extra-uterine pregnancy, by the rapidity with which they are formed; from retroversion of the womb, by the use of the uterine sound; from ovarian cysts, by the comparative isolation and mobility of the latter; from malignant or fibrous growths, by the history of the case. In many cases, however, nothing but the exploratory trocar will enable us to come to a certain decision. The treatment, the author considers, should be *preventive*, directed against inflammation of the ovaries; *palliative*, following up the last; and *curative*, which consists in puncture with a large trocar, *not* to be followed by irritating injections. He says emphatically:

"*I am fully satisfied that, in a retro-uterine hæmatocele of any considerable magnitude, it would be safer to penetrate the tumor twenty times, than to 'always rely on absorption.'*"

The following are the propositions which are appended to the paper read before the Academy:

"*First*, that bloody tumors within the female pelvis are not met with frequently, and should not be confounded with pelvic cellulitis or its consequences. *Second*, that the relative location of the tumor is not an infallible guide in determining as to its intra- or sub-peritoneal character. *Third*, that certain pathological principles and physiological phenomena inseparable from such inquiries make it, at least, very probable that the *causes* which predispose to the two forms of hæmatocele are not only entirely distinct, but differ from each other as widely as pleurisy and pneumonia; and *fourth*, when inflammatory action precedes these hæmorrhages, the character and seat of said inflammation determine the location of the effused mass."

In respect to causation by "*disordered menstruation*," Dr. B. forcibly says:

"If, in a case of pulmonary hæmorrhage, the subject of which presented all the external as well as auscultatory evidences of phthisis, or in that of rust-colored expectoration consequent upon an attack of pneumonia, we should attempt to explain these symptoms by gravely asserting that they were the result of disordered bronchial secretion, what light would thus be thrown upon the true nature of either condition? And yet, '*disordered menstruation*,' and the affection under consideration, can hardly be said to bear any closer relation as cause and effect."

“The opinion that in subperitoneal hæmatocele the vaginal tumor is lateral, while in the intra-peritoneal form it is central, he considers that he has disproved by experiment on the dead body; water injected into an opening in the superior fold of the broad ligament, on the left side, and at a little distance from the inferior border of the ovary, forming at once “a large *central retro-uterine swelling*.”

The fact that four-fifths of the authenticated cases occur in women who have borne children leads to the inquiry whether the utero-ovarian veins may not become permanently dilated as a “*necessary consequence of pregnancy*,” and whether in these cases ovarian inflammation be not properly *ovarian phlebitis*?

The question is an interesting and ingenious one, but, of course, needs much investigation and exploration before it can be decided in either way.

We have thus endeavored to give our readers some idea of this timely little essay, not to enable them to dispense with, but to induce them to procure it. We feel sure that they will consider themselves well repaid for so doing.



Hand-Book of Surgical Operations. By STEPHEN SMITH, M.D., Surgeon to Bellevue Hospital. New York: Baillière Brothers, 440 Broadway. 12mo, pp. 253 and viii.; Index, pp. 17.

This is an unpretending, but really useful, little work. Although its nature and purpose preclude claims of originality, Dr. Smith has most creditably performed the difficult task of furnishing “a pocket companion containing the details of the more common as well as the important operations in surgery.” Having been prepared, as we are informed, at the suggestion of friends who early entered the medical staff of the Volunteer Army, it “is limited to those branches of operative surgery which are of the most importance to the military surgeon.” This fact undoubtedly makes it more particularly welcome, in these times. The author’s personal views as to the bounds of the limits thus laid down seem to have led, however, to some omissions which we regret. The volume would not have been rendered any less convenient or portable by adding brief directions for performing operations which, when at all required, admit of no long delay or preparation; f. i., that for hernia, tracheotomy, etc. For the same reason, we should have preferred a little more space to have been devoted to the subject of hæmorrhage, even to the abbreviation or entire exclu-

sion of such subjects as vaccination. There can be, it seems to us, no question but what the course indicated would have rendered the work still more serviceable to the military surgeon, who, the author says, "must either encumber himself with the large treatises on general and operative surgery, [since the commencement of the rebellion some half dozen hand-books of military surgery have been published among us, however, for his use,] or rely upon his unaided memory in the emergencies of the service"—*as well as* to "the surgeon in civil and hospital practice," to whom the work is also offered, with the assurance, "it is believed that it will prove to this class of practitioners a useful and acceptable aid to the memory." Accidentally opening the book at p. 15, we could, to be severely critical, greatly find fault with the author, who, speaking of inserting the wire suture, pictures and describes both Lister's and Price's needles, and makes no mention of the simple and efficient needle now so largely used in this city, and recently presented to the Academy of Medicine by Dr. Gardner; and describing the various forms of sutures, makes no mention of Higginson's substitute, of arming the margins of a wound with strips, and stitching these together.

But if from such remarks our readers were to conclude that we have formed an unfavorable opinion of this hand-book, they would err; on the contrary, we can assure them that the most searching criticism leads to the highest appreciation of Dr. Smith's labors. Within the limits that he has prescribed for himself, not only has he endeavored "to embrace the greatest number of subjects, to arrange them in the best form for reference, and to give the largest amount of practical details, anatomical and operative," but he has also *admirably succeeded* in presenting a mass of facts and practical hints, of exceedingly great value to operators of even greater experience than those for whom the book is in the first place intended. We have neither space nor time to enter into a detailed review, but may state that the volume contains six chapters. The 1st, entitled "Minor Surgery," treats of Instruments, with the manner of holding the scalpel and bistoury, and making incisions; union of wounds; dressings, embracing bandaging, strapping, lint, and application of water; hæmorrhage; blood-letting; counter-irritants; vaccination; and anæsthetics. Chapter 2nd is on the arteries; especially thorough on their surgical anatomy and ligation. Chapter 3d is on the veins, wounded and varicose. The next two chapters are respectively on amputations and resections; they form the major part of the volume, and as a practical summary of these subjects, we do not withhold from them

our unqualified approbation. In Chapter 6th, "Gunshot Wounds," Dr. Smith, "not presuming to discuss these subjects from the standpoint of civil practice," judiciously furnishes an abstract of Prof. Longmore's treatise, noticed on page 450 of this Journal.

A distinguishing excellence of the Hand-Book is the large number of pictorial illustrations, embracing both the most approved instruments and modes of performing the operations discussed. *

EDITORIAL AND MISCELLANEOUS.

— We desire respectfully to call the attention of all to whom the notice applies, to the urgent request of the publishers of the MONTHLY, fronting the first page of this month's issue, and to supplement it with the expression of our earnest desire that it may receive from our friends and readers a prompt response.

In these days of civil war, with all its blighting effects, necessitating retrenchment and economy, and giving promise of future high taxes, journalism, and especially medical journalism, is not a lucrative avocation. The publishers do not, therefore, call upon our subscribers to pay up promptly with any expectation of filling their own coffers, but merely from a desire to be able, as always heretofore, to discharge honorably and promptly the just obligations of the MONTHLY. If subscribers do not pay the printer gets no money, and if the printer be not paid subscribers in their turn will fail to receive the monthly "feast of good things," which the editors have ever endeavored to set before them. The chain of argument is brief, but irrefragable.

We point with confidence to the seventeen volumes of the MONTHLY as evidence that we have never in the past spared any pains to make the MONTHLY a vehicle of valuable medical knowledge and information, as well as an interesting and readable journal, and we have the satisfaction to know, from numerous letters received from time to time, that our efforts are not unappreciated by our readers, and that the MONTHLY is a welcome visitant to many laborious members of the profession. Therefore, counting confidently upon the generous support of our friends, we gladly pledge ourselves to continue to labor assiduously in the future for their benefit and advantage, and to maintain the reputation of our journal if they, on their part, will but discharge the single plain duty that devolves upon them.

— UNIVERSAL SOCIETY OF OPHTHALMOLOGY.—The object of this Society is to advance the science of Ophthalmology by yearly meetings, establishing a pathological collection, and publishing transactions. It is to change its seat of action yearly from one to another of the great scientific centres of the world. Eleven such centres, all of them European, have so far been selected. The most celebrated names figure in its lists of committees, such as Sichel, Desmarres, Von Graefe, Bowman, Arlt, Mackenzie, Wilde, etc., etc. We learn that Drs. Valentine Mott and Julius Homberger, of this city, and Drs. Pancoast, Hays and Little, of Philadelphia, compose the American Committees.

The first meeting of the Society will be held at Paris, between September 30th and October 3d, of this year; and the Central (Parisian) Committee has issued a request to the governments of all civilized nations to send delegates to its sessions. We presume the American Committees will soon officially invite all parties interested to participate.

— NEW YORK MEDICAL COLLEGE AND CHARITY HOSPITAL.—Dr. R. K. BROWNE having been appointed Brigadier Surgeon in the Army, has resigned the Chair of Physiology and Microscopic Anatomy in this institution. We understand that the Professorship is now vacant.

—"Some time since, it may be recollected, we called attention to an error in the last English edition of 'Samuel Cooper's Dictionary of Surgery.'

"In the *British Medical Journal* of April 12th, Mr. J. E. Erichsen, the distinguished surgeon of London, published the following satisfactory explanation:

"*'The First Ligature of the Internal Iliac Artery in the United States.*—SIR: In the last number of the *Journal*, under the heading of "A Slight Error," it is stated that I have, in the last edition of *Cooper's Surgical Dictionary*, attributed to "Mr. Hudson, of New York," instead of to "Dr. S. P. White, formerly of Hudson, in the State of New York," the merit of having first tied the internal iliac artery in the United States of America. The error is not mine, but Mr. Cooper's. It occurs in the edition of 1838, from which the new issue of the *Dictionary* has been compiled, etc.

" 'I am, etc.,

JOHN E. ERICHSEN.

" '6 CAVENDISH PLACE, April 8, 1862.'

"We avail ourselves of this opportunity to correct a few other errors in relation to this important and difficult operation. Mons. Velpeau, the celebrated surgeon of Paris, in his valuable and elaborate work on surgery, attributes the operation in one place to Samuel White, and in another to M. P. White. Dr. Mott, in his notes, gives

it correctly to Dr. S. P. White. Lecturers in our Medical Colleges, when alluding to the subject, have often spoken of it as the ligature to the common iliac artery instead of the internal iliac artery. It is very curious that the error should have lain uncorrected for twenty-four years in Cooper's *Surgical Dictionary*, and it can only be accounted for on the ground that the American edition is principally used in the United States. It is strange, also, that the *British Journal* should denominate it a 'slight error.' It ought not certainly to be considered in that light by the gentleman who really performed the operation."—*American Medical Times*.

As stated in the article on *Aneurism* in *Cooper's Surgical Dictionary*, "the Emperor Alexander conferred a pension on an English surgeon in the Russian Army, as a reward for his skill and dexterity, in successfully performing this operation upon one of his subjects." If our Government should be disposed to show the same grateful liberality,—and such governmental recognition is well deserved by the operator,—it would indeed be more than a "slight error" if it should be granted to any "Mr. Hudson." We may add, that it is now about thirty-four years since Dr. White performed this operation upon an aged soldier of the Revolutionary War, and saved his life from impending death by hæmorrhage. He attended the man with great assiduity, and at a distance from his residence; and the only pension or remuneration he ever received was (considerable, to be sure,) *the satisfaction of curing his patient*.

— MEDICAL REVIEWING.—The late application for criminal information against the *London Lancet* on the part of Dr. Hastings, author of a work in which he stated that he had discovered a remedy for the cure of consumption by the use of the excrement of snakes and reptiles, suggests, says the *Medical Times and Gazette*, "a word or two on the subject of medical reviewing. The professional man who reviews a medical book is not in the position of an ordinary critic. Besides the common duties and responsibilities of criticism, he has two obligations which are binding on him: the one is to protect the public from quackery and charlatanism; the other to direct and guide, as far as his talents and acquirements permit, the profession to whom the law intrusts life and health. It would be in the highest degree criminal were he to show fear or favor. The author who sends a book to a medical journal for review voluntarily submits it to the ordeal. If it contain anything contrary to common sense or to scientific teaching, he must be content to bear the brunt to which he has of his own accord exposed himself. In our judgment, also, the medical reviewer has a

perfect right to give currency to any opinion he may have honestly formed as to the author's previous scientific attainments and standing, if by so doing he enable the reader to form a more just estimate of the value of observations or theories advanced. We are glad to see the firm stand made by the judges on the occasion of Dr. Hastings' application. It is evident they estimated the reptilian therapeutics at what they are worth. By their decision they have at once vindicated the general freedom of the press and the especial prerogatives of legitimate medical criticism." That these remarks as to the rights and duties of the medical reviewer accord with our own convictions and practice, it is needless, we trust, to assure our readers. We heartily commend this paragraph to the attention of both writers and publishers.

— MEDICAL RESPONSIBILITY.—ACTION FOR MALPRAXIS.—The question of medical responsibility has been stated with some precision in a judgment delivered by the Tribunal of the Seine in an action for malpraxis in which the damages were laid at 10,000 francs; being, in fact, a cross action in reply to one on the part of the doctor for payment of his fees. The nature of the case is not detailed in the report, the fact of the patient remaining lame after treatment being alone stated. The judgment affirms that medical practitioners must not be rendered responsible on account of the manner in which they have thought proper to operate, the mode or system of treatment they have adopted, or the external applications which they have in certain cases had recourse to—all these questions coming within the domain of practice and science. They must not, however, shelter themselves under this principle when it has been established that they have acted with gross want of skill or carelessness, and contrary to the rules of art and the conclusions of science. The *experts* (MM. Velpeau, Michon, and Boys de Loury,) while admitting the reality of the infirmity complained of, declared that it was caused by no fault of the practitioner, and the bill of 500 francs was ordered to be paid, together with all expenses. The *L'Union Médicale* points out how important it is in the appointment of *experts* that they should be instructed to apply the above principle, which would require the proof of gross want of skill, to insure the conviction of a practitioner. Too often it happens that the *experts* are only instructed to inquire whether he has committed a fault, and if they disagree with him on some point of treatment, that, in their eyes, constitutes a fault.

— EXTRAORDINARY ACCIDENT TO A CHILD WITHOUT ILL EFFECTS.—M. Josat gives an account of the miraculous escape of a child from the

consequences of a frightful accident. This infant, aged twenty-nine months, playing at a window of a house, No. 30 *Rue de la Paix, Paris*, lost its balance and fell out from a *height of five stories*, striking a hat from the hand of a hatter, who was carrying it home. He lifted the child gently from the pavement and carried it into the house, when after a few minutes the infant heaved a sigh, and then uttered a small doleful cry. All the functions were gradually re-established, and it was found that there was neither fracture or dislocation. A week after, the child was found playing and merry, as well as ever; the only traces of any accident being three broken incisors of the upper jaw, and much ecchymosis of the eyelids.

— THE PAMARD AFFAIR.—We have more than once alluded to this singular occurrence, in which a Dr. Pamard, Deputy to the Chambers for Avignon, has been accused of appropriating a membership of the Academy of Medicine which was really conferred on his father, at whose death he seems to have taken it as son and heir. The *Indépendance Belge* first set on foot the report of the transaction, and this was copied into various French newspapers, the proprietors of which were duly prosecuted and punished. We find any further remarks of our own must be very guarded, lest we bring ourselves within the terrors of the French law; for it seems now that the *Indépendance Belge* itself has been cited to appear before the French tribunals, and that there are French lawyers who think that it may be forced to do so! A *casus belli*, at the very least, may arise. All this time the Academy is silent, not being able, owing to the disgraceful laxity with which its records have been kept, to state who really was elected, father or son!—*London Med. Times and Gaz.*

— NEW CHAIRS AT THE PARIS FACULTY OF MEDICINE.—“As a specimen of how even good actions are sometimes done by the French Government in the most repulsive because the most despotic manner, we may note the establishment of two new chairs at the Faculty of Medicine. No member of the Faculty was consulted, and no intimation given to that body until the decree was published in the *Moniteur*, establishing chairs of Comparative Medicine and Histology, and nominating the first occupants, viz., M. Rayer for the former, and M. Robin for the latter. This last nomination must call for unanimous approval, fallen as it has upon one of the most distinguished microscopists, who has done much to retrieve the backward condition of histology in France. As to M. Rayer, with a large practice, and advanced in years as he is, it has excited some surprise that he has taken the post, especially as he has also been appointed

to the onerous office of Dean of the Faculty, (by the same absolute decree,) in place of M. Paul Dubois, resigned. The sudden surprise of the Faculty at the appointment has given rise to the witticism that his body has been struck by a *coup de cannon rayé*, (rifled.)—*London Medical Times and Gazette*.

— HYDROPHOBIA.—In the month of February last we gave an account of a young girl having been attacked by a wolf at Breil, in the arrondissement of Nice, and of her being saved by the courage of a brigadier named Dellerba. We regret to announce that the latter has just died a victim to his devotedness. The wounds which he received in his struggle with the animal were healing favorably, and his complete recovery was looked on as certain, when, about a week ago, fifty days after the event, symptoms of hydrophobia came on, and he died two days afterwards in a fearful paroxysm of madness.—*Galig-nani's Messenger*.

— CONSERVATORY IN THE CENTRAL PARK OF NEW YORK.—We perceive that the Central Park Commissioners have contracted with Messrs. Parsons & Co., of Flushing, for the construction of a grand conservatory, the largest in the United States, upon the Park grounds. The building is to be a "Crystal Palace" of iron and glass, 200 feet long, 70 feet wide, and about 50 feet high. Its base will be a parallelogram, and there will be three stories, curving inward like the successive folds of a turban. The conservatory will front Fifth Avenue; its centre being opposite Seventy-Fourth Street; and directly in its rear will be a beautiful little pond, with walled sides of a symmetrical shape, which will be built during the coming two years. When the Fifth Avenue is graded to its proper height, it will be on a level with the second story of the proposed conservatory, and the main entrance to the edifice will therefore be on that story. Stairs and balconies will give access to every portion of the building. The contract provides that the grantees must erect the building entirely at their own expense, after the plans already agreed upon; that they must place in it nothing but flowers or rare trees or plants; that they shall be allowed to sell bouquets, &c., to visitors; that the public shall always be admitted free; that good order shall always be maintained inside, at the expense of the grantees; and that the work shall be completed by the 1st of January, 1864. The specifications of the contract are minute, and are believed to cover the objections which might be made to the granting of a monopoly of such a character. The grantees, on their parts, agree to pay a rent which will add considerably to the revenues of the Park. The conservatory will cost about \$50,000.

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